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## ABSTRACT

The development of a pre-service training program over a three-year period for faculty at Burlington County College, New Jersey is discussed. Burlington County College, which began operation in the Fall of 1969, emphasizes various modes of instruction, with the long-range goal of facilitating individualized instruction. Summaries of six revisions made to the pre-service program are presented. The objectives, procedures, and evaluations of the 1969, 70, and 71 programs are provided, and a field test made at Ocean County College is described. Following the field test, final revision was made of the pre-service program. The program not only influenced basic attitudes, but provided new faculty with knowledge and skills needed. The major contributions of the project were as follows: (1) a collection of validated learning objectives for a faculty pre-service program, sequenced in a rational fashion, and keyed to materials available to any institution; (2) some very useful instruments--a validated pre-service attitude questionnaire; a validated quiz on those aspects essential to understanding the students in the community college; an annotated bibliography on pre-service and in-service training of community college faculty; and a checklist of items to send to new faculty members prior to their arrival on campus; and (3) a chronological record of the program development. Appendixes provide 1969, 1970, 1971 Pre-Service Program Outlines; Final Version of Burlington County College Pre-Service Program; Checklist of Materials Sent to New Faculty Prior to Arriving on Campus; Evaluation Summaries for 1969, 1970, 1971 Pre-Service Programs; Evaluation Summary of Field Test; and Annotated Bibliography. (DB)

ED 077747

DEVELOPMENT OF A COLLEGE CONDUCTED  
FACULTY PRE-SERVICE PROGRAM

1969-1972

Final Report  
EPDA Grants 70-2037, 70-2037-1

JC 730 054

UNIVERSITY OF CALIF.  
LOS ANGELES

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Project Director:

MAR 30 1973

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## PREFACE

In the fall of 1969, a new community college began operation in Burlington County, New Jersey. Unlike many of its predecessors, this institution was planned to be different, especially with regard to the instructional approach to be used at the college. In place of a conventional lecture based, group-oriented approach to instruction, it was planned that this college would emphasize the use of various modes of instruction (large group, seminar, audio-tutorial, independent study, etc.) with the long range goal of facilitating individualized instruction. And, just as early planners realized the need for a different building design to facilitate this unique concept, they also acknowledged the need for a unique kind of faculty member to implement this philosophy. Realizing that most potential faculty members would not be knowledgeable about the principles of this approach, they decided to attract conscientious, student-centered, innovative-minded persons and then develop their skills in the new pedagogy during a college conducted, pre-service training program. Development of an effective pre-service program for faculty at Burlington County College was not to be an overnight event. Rather, it gradually evolved over a three year period during which time numerous mistakes were made. This work summarizes the six revisions made during the three years with particular emphasis on some of the lessons learned. Written from a

chronological viewpoint, it is most candid in its statements of what did, and what did not work, and should serve as an invaluable resource to other persons facing a similar challenge.

In 1969, literature concerning in-house pre-service training of new community college faculty members was virtually non-existent. References which did exist were primarily exhortations for more effort in this area when what was needed was not to be told that one should plan a pre-service program, but how to do it. To a large degree, the situation has not changed significantly. Hopefully this publication will help fill the void.

Several elements are still needed for the program to be complete. These are sections in the areas of:

- 1) Student personnel services;
- 2) Faculty advising.

Time did not permit much effort in those areas and for that an apology is made. But no apology is made for the program materials which were developed. When properly used, they have demonstrated effectiveness in influencing faculty attitudes and increasing faculty knowledge and skills.

It is appropriate at this time that I gratefully acknowledge the assistance of other persons who assisted in their development. The first of these is Harlan Douglas, Dean of Instruction at Reading Area Community College, who was Educational Development Officer at Burlington County College during the period covered by this report. His assistance, advice, and encouragement were invaluable to me, especially during

the early part of the project. The other persons are the 107 faculty members who worked through the materials and provided me with feedback. Without them, none of this could have been done.

I would also like to acknowledge the financial assistance and moral support received from the Educational Professions Development Act and its chief community college representative, Jack Orcutt.

James O. Hammons  
December, 1972

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## THE 1969 PRE-SERVICE PROGRAM

### Objectives and Procedures

The first pre-service program was conducted for the charter faculty immediately prior to the opening of the college. In retrospect, four features characterize this first effort. These were its highly structured, yet poorly organized program; its length (seven weeks); its very traditional nature; and the degree to which it failed.

The twenty-one charter faculty members who participated worked through a program which appeared to be extremely well planned (Appendix A). In practice, however, it proved to be poorly conceived, and woefully inadequate in real substance.

The seven-week duration of the first pre-service program exceeded by five weeks the length of the final product. Even considering the fact that participants of the first program were the charter faculty and had the herculean task of selecting texts, writing course syllabi, etc., the program was much too long.

The traditional nature of the program was reflected in such time honored traditions as a Sunday afternoon picnic preceding the Monday opening session, words of welcome on the first morning by the President of the college, an endless succession of very highly qualified speakers throughout the session, and a faculty-Board get acquainted social.

The fourth distinguishing characteristic was the extent to which it failed to reach its objectives. On an evaluation questionnaire handed out at the end of the workshop, only nine of the thirteen goals (Appendix F) were rated by better than fifty per

cent of the participants as having been achieved (and part of this was probably due to a desire to avoid hurting the Dean's feelings). Twelve other questions pertaining to the workshop fared no better. Only six were scored excellent or good by fifty percent or more of the participants. Open ended questions intended to obtain participants' suggestions to improve the workshop filled thirteen single spaced typed pages--which for twenty-one respondents must be some kind of record for feedback!

In all fairness to other persons involved in the planning of the workshop, some mention should be made of the conditions under which the workshop was held. The period from July 7 to August 22 is traditionally the hottest period in South Jersey. The program was conducted during that time in a large, non-air-conditioned high school, with virtually no work space for faculty. Furthermore, during the workshop, the high school custodian crew was busy readying the building for fall classes.

Also, due to budgetary restraints, a large percentage of the faculty were relatively inexperienced and considerably more concerned about "getting ready for school to start" than on achieving any of the thirteen goals of the workshop.

#### Major Conclusions Reached After the 1969 Program

After analyzing the evaluation of the workshop, several conclusions were made:

1. If the primary purpose of a pre-service program is to prepare faculty to work in a highly innovative college, using non-traditional approaches to instruction, then the workshop used to teach them should be conducted

as a model for them to emulate in their classrooms.

2. Only those events which require group interaction should be scheduled; all remaining time should be left unscheduled so that faculty can work individually (and have time to handle pressing personal problems).
3. The human and social needs of a group of people thrown together for the first time must be considered, and provided for. Exercises designed to help them get acquainted quickly and determine resources within the group are especially important.
4. If at all possible, institutional personnel should carry the primary instructional load for the workshop. Consultants should be used sparingly, and for very specific purposes. In all cases, avoid the situation where a consultant comes in, makes a speech, and leaves.
5. Time is critical. The workshop must be very carefully planned so that maximum results can be accomplished in minimal time. Participants must have the feeling that they are "in good hands."
6. Participants should be involved in "doing," rather than "talking" as soon as practicable.
7. Formal meetings should be scheduled in the morning hours as much as possible.
8. To insure that faculty know that "real" importance is attached to the workshop, key administrators (dean, division and department chairmen) should participate to the maximum degree feasible.
9. Insure that any staff member responsible for any part of the workshop is thoroughly prepared and well organized.

This is especially true of support persons such as those from the business and payroll areas. Don't waste time!

10. Don't expect too little from the participants.
11. Be very careful about who is placed on the program. Don't hesitate to say "no" to requests for "time to say a few words to the new faculty."
12. Avoid "VIP" presentations, such as long welcome speeches by the President or Chairman of the Board of Trustees. Instead, have them become active participants in some part of the program.
13. Develop a tentative means for evaluating the workshop before it begins and revise it during the workshop as experience indicates.
14. Create an open atmosphere at the very beginning, and encourage constant feedback.
15. Once the program is established, don't be too quick to change it.
16. Assign overall responsibility for planning of the workshop to one person and give him the necessary authority.

In large part, efforts of the next two years were spent in developing a program which fully achieved these guidelines.

## THE 1970 PRE-SERVICE PROGRAM

### Objectives and Procedures

Due to a decision to seek EPDA funding to support our efforts in developing a valid pre-service program, planning for the 1970 session began before the 1969 program was completed. However, even before work was started on the EPDA proposals it had already become quite clear that a major effort was needed to make the pre-service program more effective.

The original proposal which was submitted on August 1 had as its major objectives to:

- (1) determine those concepts which should be included in a pre-service orientation program for new community college faculty;
- (2) to teach these concepts, using materials developed for use in a three-week pre-service program;
- (3) develop a list of recommendations regarding materials and information which should be furnished new faculty prior to their arrival on campus;
- (4) conduct the pre-service program as we wanted our faculty to conduct their classes, in an individualized instruction format, using self-instructional materials;
- (5) develop a bibliography of relevant sources on pre-service and in-service materials.

In November, we received word that our EPDA proposal was being favorably considered and might be funded if we could

involve other colleges. Two other institutions, Brookdale Community College of New Jersey, and the Community College of Delaware County, Pennsylvania agreed to participate with us.

A number of planning meetings were held with representatives from these two institutions during which agreement was reached that, to the extent possible, the other two schools would use the Burlington materials in their faculty orientation programs. (Neither of the other two schools were able to schedule and finance an extensive three-week pre-service program.)

In late February word was received that the EPDA proposal had been funded and detailed planning began. Through the invaluable assistance of Marlan Douglas, the newly appointed Educational Development Officer, an estimated 75% revision of the Burlington materials was accomplished. The activities of the previous seven-week program were reduced (see Appendix B for outline of the program) to three weeks and the first attempt at developing self-instructional material was made. In the process, a large quantity of commercially available materials was reviewed, and work was begun on an annotated bibliography of literature on pre-service and in-service training. (The final bibliography is included as page 121 of Appendix D) Based on feedback from the proceeding year, a new list of information and materials for new faculty was assembled and distributed.

### Evaluation

In large part, the attempt at meaningful involvement of the two other institutions failed, largely due to several changes in personnel and organization, and the inability of the other two colleges to fund an extensive pre-service program similar to that at Burlington. They did, however, use parts of the Burlington program and one school later submitted a successful EPDA proposal to develop a pre-service program.

Five different techniques were used in evaluating the 1970 pre-service program. These were:

- (1) A locally constructed questionnaire used to assess participant reaction to the get-acquainted and team building exercises conducted the first two days of the program by National Training Laboratory staff.
- (2) A locally developed attitude survey administered before and after the program. This was designed to measure changes in attitude in four major areas:
  - a. the nature, purpose, and functions of the two-year college;
  - b. instructional aims and role of the faculty;
  - c. the systems approach to instruction;
  - d. the student in the two-year college.
- (3) A questionnaire of local origin designed to obtain feedback regarding the conduct, merit, and shortcomings of specific sections of the program.
- (4) An Office of Education furnished Participant Information and Evaluation Form.
- (5) Notes taken during an oral critique session.

In an earlier report, complete data from each of these was furnished EPDA officials. Consequently, in view of this, and the fact that the 1970 evaluation was formative, rather than summative in nature, only data from the OE form is included in the appendices (Appendix G).

Significant progress was made in the 1970 program and many of the serious flaws of the 1969 program were corrected. However, while a giant step had been taken, much work remained to be done if the program was to accomplish all of its purposes and if it was to deserve the optimistic title of that year's EPDA proposal - A Model Pre-Service Program for Community Colleges. A listing of the major accomplishments of the 1970 program as well as the work remaining to be done is shown below:

- (1) Although the magnitude of shift was not large, a general move toward more positive attitudes occurred in all four areas included on the attitude survey.
- (2) Reaction was generally quite positive with respect to the extent to which objectives of the first two days (get-acquainted, team building, etc.) were accomplished. However, there was a general feeling that different methods would have been more appropriate - an observation made (incorporated in the 1971 program) was that there were persons within the faculty who could accomplish the same results.
- (3) We succeeded in creating an atmosphere in which people were free to express their questions, concerns, and fears.

- (4) "VIP" presentations were almost totally eliminated yet not one comment was made regarding their absence.
- (5) Time was used much more efficiently. In two weeks, we not only did better but included more than we had in the previous year in seven weeks.
- (6) Formal group meetings were held to a minimum - again with no apparent adverse results.
- (7) Comments regarding materials used (book and non book) were generally positive, indicating that we were on the right track. However, there was evidence that we were asking them to read too much in the time allotted, and that there was considerable duplication in the materials.
- (8) There were indications that the sequencing of activities needed to be re-examined.
- (9) It was readily acknowledged that the workshop had been ~~conducted~~ in the same fashion that we wanted faculty to conduct their classes. In fact, one person noted: "I hope I do as well in my classes as you have with this program."
- (10) Time was not well utilized. In fact, the single most repeated criticism was that the program could easily have been reduced to two weeks with proper planning.
- (11) Division chairmen, due to the pressures of getting moved into new facilities and vacation schedules, were unavailable much of the time. Numerous comments were made about their absence.

- (12) Large group presentations were generally rated low, seminars average, and independent study activities above average, pointing to room for improvement.
- (13) It was suggested that next year's program should be scheduled such that there would be a week between the end of the pre-service program and the beginning of school, in order to allow time for personal matters and "putting into practice" what had been learned.
- (14) It was suggested that old faculty be more involved in the workshop.
- (15) Instructional facilities were poor. (This was almost a universal complaint due to the fact that the scheduled move to the new campus was delayed, causing us to begin the workshop in non-air conditioned facilities. In addition, we were constantly disturbed by the noise of construction, etc.)

## THE 1971 PRE-SERVICE PROGRAM

### Objectives

Once again, EPDA application deadlines caused us to submit our proposal for continued funding before the current workshop was concluded. The 1971 proposal asked for funds to (1) revise the materials used in the 1970 program; (2) convert them into a self-instructional format; (3) fit them into a two-week period; (4) administer them to another group of full-time faculty; (5) assess their potential usefulness for part-time faculty; and, (6) revise and package the materials in a format useable by other community colleges. Additionally, we proposed to update our growing bibliography on pre-service in-service training.

### Procedures

Each of these objectives was accomplished. After a careful review of evaluation data from the three week 1970 program, we were able to reduce the length of the pre-service program from three weeks to two weeks. In conjunction with this, we again revised the materials, this time converting almost 90 per cent into a self-instructional format.

During August of 1971, the revised materials were used with 18 new faculty with outstanding success. Following this, they were revised based on feedback received from six evaluation instruments. Then during a series of Saturday meetings held the fall semester they were tested with a group of 12 volunteer adjunct faculty, again with outstanding results.

Two evaluation instruments yielded revision data which was used in again revising the materials. This version was field tested with another group of 12 volunteer adjunct faculty (also with outstanding results). Revision data was again obtained and minor changes were made, this time with the thought in mind that they would be used on another institution.

#### Evaluation Data

1971 Pre-Service Program - Six different evaluation instruments and a verbal critique were used to evaluate the 1971 pre-service program. These were:

- 1) A revised form of an attitudinal questionnaire first used in 1970.
- 2) & 3) A 40 item questionnaire which asked participants to first judge each event of the pre-service program in terms of its importance to them and then to rate the same item in terms of its quality.
- 4) A survey form used to get feedback regarding the first day's get-acquainted exercises.
- 5) A survey of attitudes about topics related exclusively to teaching-learning. (This was a pilot test of a new instrument which was later combined with (1) above.)
- 6) The OE designed Participant Information and Evaluation Form which was used in 1970.

In the interest of length, detailed data from only the OE form is included in the report (Appendix H). However, conclusions based on an analysis of all six instruments and an oral critique are summarized on the following pages:

- 1) Based on a comparison with the results of the 1970 program (See Appendix G) it could be said that significant improvements had been made in every aspect of the program.
- 2) Two weeks was an adequate length of time for the workshop for the majority of the participants.
- 3) Scheduling the workshop such that participants had a week off between the end of the program and the beginning of classes was a good idea and should be continued.
- 4) Using local personnel (a speech teacher and a counselor) to conduct the first day's get-acquainted activities was a decided improvement over the previous year. However, more than one-half day should be allocated for this.  
(One day, if properly structured, should be sufficient.)
- 5) The workshop made a definite impact in causing faculty to become more positively disposed to using a systems approach to instruction.
- 6) Noticeable shifts toward more positive attitudes were detected than in the 1970 program. However, since no statistical analysis was made, it is not known if this was a significant difference.
- 7) Rating of materials, both book and non-book, showed a noticeable improvement over the preceding year, as did large group presentations. Independent study activities continued to fare best, however.



- 8) For the first time, chairmen were meaningfully involved in the program. This was very positively received and should become routine.
- 9) Attention should be given to an examination of the role of learning resources personnel in the program. Participant's reaction implied that there was "too much information, by too many people, too soon".
- 10) A Careful task analysis of the activities of the program was needed. There were still some indications of duplication, extraneous materials, etc.
- 11) The sequencing of activities needed to be reviewed with the thought in mind of moving tours, familiarization with learning resources and computer support, etc., to the second week, possibly spacing these activities so as to provide "breaks" from concentrated independent study activities.
- 12) These portions of the program to which considerable effort had been focused in the 1969, 1970, and 1971 programs were basically "set". It was now time to give attention to several other components of the program, namely:
  - a) the role and function of student development services and staff;
  - b) faculty advising responsibilities;
  - c) routine personnel information and processing;
  - d) faculty activities within an academic division;
  - e) faculty affairs (governance, collective bargaining, etc.).

13) The materials should be completely revised into a new format which hopefully would cause less confusion and would serve as a model for them to use in their development of course materials.

Use With Adjunct Faculty - As indicated earlier, the materials were used with two separate groups of adjunct faculty who volunteered to attend Saturday sessions. Two types of evaluation instruments were administered. These were: 1) the attitude survey used in the 1970 and 1971 pre-service programs; and 2) the OE developed Participant Information and Evaluation Form.

Results obtained from these two instruments are summarized below:

- 1) The program was enthusiastically received. In fact, the adjunct faculty were so positive in their reactions to it that the workshop was continued for an additional term.
- 2) The evaluation results were totally positive. The general reaction is summed up in a quote from one participant:

This training program has convinced me that good teaching is not an easy task, that I need to know more than the subject matter, and that I can do a better job than I'm doing now . . . I am now thinking more about the overall approach to the course instead of . . . what do I have to cover the next week.

- 3) Several changes suggested by the participants were:
- a) a slight restructuring of the sequencing of the program; and
  - b) additional emphasis and time on some topics, especially those involving writing of objectives and learning packets.

FIELD TEST AT OCEAN COUNTY COLLEGE

Toms River, New Jersey

The final test of the effectiveness of the revised program was a field test at another community college. As originally planned, this was to be conducted at the Delaware County Community College, Pennsylvania, but when this failed to materialize, the Dean at Ocean County College agreed to allow Dr. Hammons to conduct a seven day workshop for his faculty, using the Burlington pre-service program materials. This workshop was held on June 12-22, 1972. Nineteen persons completed evaluation forms, although 24 different individuals participated in different parts of the workshop. The evaluation instrument used was the OE Participant Information and Evaluation form.

Despite the fact that the participants had little advance notice, and many were involved in the activities of the summer term, the workshop was an outstanding success. No one rated the overall quality below good, and 78 per cent rated it very good or outstanding. Seventy-eight per cent also felt that the programs would be very relevant to them in their professional work. As desired, 68 per cent indicated that the primary value of the workshop was an attitude change or exposure to a new methodology. Sixty-six per cent felt the materials integrated well with their previous background and interest, while only 5 per cent felt that it was over their heads, thus indicating that the content of the program is relevant in settings other than Burlington County College. The length of the program was thought to be appropriate by 82 per cent who reported that it

was "about the right length." Seventy-seven per cent indicated that it met their objectives for attending and 100 per cent said they would recommend the workshop to a colleague.

A number of very useful comments were made in the sections "strengths and weaknesses" and "suggestions for revisions prior to additional workshops." Persons interested in planning and conducting similar workshops would definitely profit from reading these.

In summary, the evaluation confirmed what the Director had thought--the Burlington materials, when properly used, could be quite effective when used in another two-year college.

## FINAL REVISION OF THE PRE-SERVICE PROGRAM

The next-to-last steps in the development of what might now be justly called "A Model Pre-Service Training Program for Community College Faculty Members" occurred when the materials were submitted to a panel of three nationally known persons for their review. Those persons selected were:

Dr. Barbara Washburn  
Educational Development Officer  
Mitchell College  
Statesville, North Carolina

Dr. Robert Miller  
Dean of Instruction  
Tarrant County Junior College  
Fort Worth, Texas

Mr. Terrence Tollefson  
Director  
Division of Community and Junior Colleges  
National Laboratory for Higher Education  
Durham, North Carolina

Their comments were quite positive and served as additional evidence that the materials would be relevant in other settings.

The last revisions of the materials incorporated the revision data from the Ocean County College faculty and the panel of reviewers.

## CONCLUSIONS

In reviewing the project as a whole, a number of generalizations can be stated. These are listed and discussed below. No significance should be attached to the order.

### 1. Impact on the program of the participating institutions.

There is absolutely no question but that the pre-service training program has been a key element in the reputation which Burlington enjoys as an innovative community college. The program not only influenced basic attitudes, but provided new faculty with knowledge and skills they would not otherwise have gained.

Follow-up reports from the Dean of Instruction at Ocean County College indicate that the workshop conducted at their institution has had a salutary impact. Many of the faculty who participated in the workshop have not only put into practice what they learned, but have shared their learning with their colleagues. The institution is doing its part in supporting the faculty by providing released time for faculty, "beefing up" the learning resources support area, and sending key administrators to be trained as educational development officers. As one administrator remarked, "The institution will never be the same again".

### 2. Major difficulties encountered.

Given the scope of work proposed, the time and money allocated for the project was inadequate. With clear 20-20 hindsight, (and almost a year in an educational research and

development organization behind me), it is quite apparent that the objectives set for the three grants were overly ambitious. This is especially true of plans to package the final product in an audio-tutorial self-instructional format for use by other colleges, complete with pre-tests and post-tests. This was not done, although learning packets for the program were finalized together with print materials needed to use them. However, time ran out before we could develop valid criterion referenced pre- and post-tests, or convert the materials into audio-tutorial format. Despite this, the materials in their present form should be invaluable to any person desiring to develop a pre-service or in-service program for faculty in community colleges.

### 3. Major contributions of the project.

The project's contributions would appear to be several. These are:

(a) An excellent collection of validated learning objectives for a faculty pre-service program, sequenced in a rational fashion, and keyed to materials available to any institution. (Appendix D )

(b) A number of very useful instruments including:

1. a validated pre-service attitude questionnaire  
(page 117 of Appendix D )
2. a validated quiz on those aspects essential to understanding the student in the community college  
(page 97 of Appendix D )
3. an annotated bibliography of some of the more useful references on pre-service and in-service

training of community college faculty (Appendix J )

4. A good check list of useful items to send new faculty members prior to their arrival on campus.
- (Appendix E)

- (c) A reasonably complete, chronological record of the development of the program. This should allow others to shorten considerably the time needed for them to develop a program.
- (d) The project demonstrated the willingness of adjunct faculty to voluntarily contribute of their time to enroll in programs to improve their teaching.
- (e) The ability of a community college to develop a viable, effective pre-service program for its new faculty based primarily on available materials, was demonstrated..

#### 4. Suggested Additional Activities

- (a) While the relevance and applicability of the program for adjunct faculty and for full-time faculty at one other community college was demonstrated, the program should be tested in other colleges.
- (b) The project should be completed,i.e. pre-tests and post-tests should be constructed, remaining non-individualized sections made self-instructional, and missing elements developed.

## APPENDICES

**APPENDIX A**  
**REVISED BURLINGTON COUNTY COLLEGE STAFF IN-SERVICE INSTITUTE**

WEEK OF JULY 7, 1969 TO JULY 11, 1969		MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY	
9:00 a.m.	Welcome & Introductions Dr. Evans, President Payroll & Personnel Processing - Mr. Chaveas, Director of Administrative Services	General Orientation to Burlington County College Dr. Evans, President	Burlington County College's Approach to Instruction - Dr. Evans & Dr. Hammons, Dean of the College	Burlington County College's Facilities - Present & Future - Dr. Evans & Mr. Ivan Cooper, Project Architect	Burlington County College's Future - Dr. Evans & Mr. Ivan Cooper, Project Architect	Burlington County College's Facilities - Present & Future - Dr. Evans & Mr. Ivan Cooper, Project Architect	Burlington County College's Future - Dr. Evans & Mr. Ivan Cooper, Project Architect	The Student - Dr. Robert Kavelman, Dean of Student Resources at Burlington - Mr. Lynn, Director-Learning Resources Center & Mr. Thomas, Coordinator of Library Services	The Faculty Member at Burlington County College - Mr. Lynn, Director-Learning Resources Center & Mr. Thomas, Coordinator of Library Services	Role of the Faculty Member at Burlington County College - Dr. Hammons	Role of the Faculty Member at Burlington County College - Dr. Hammons
1:30 p.m.	Discussion of Major Goals of Institute - Dr. Evans	Continued Discussion of Institute - Dr. Evans	Orientation to Burlington County - Dr. Evans & Mr. Mahon, Chairman Board of Chosen Freeholders	The Student - Dr. Robert Kavelman, Dean of Student Resources at Burlington - Mr. Lynn, Director-Learning Resources Center & Mr. Thomas, Coordinator of Library Services	Orientation to Burlington County - Dr. Evans & Mr. Mahon, Chairman Board of Chosen Freeholders	Divisional Meetings Afterwards	Divisional Meetings Afterwards	Divisional Meetings Afterwards	Divisional Meetings Afterwards	Divisional Meetings Afterwards	Divisional Meetings Afterwards
<b>WEEK OF JULY 14, 1969 TO JULY 18, 1969</b>											
9:00 a.m.	First Presentation: Evaluation of Current Practices in Instruction & Recommendations for Change.	Second Presentation: Outline for a Systems Approach to Instruction. Dr. Canfield	General Faculty Workshop* Dr. Hammons & Mr. Lynn	General Faculty Workshop* Former Director of Instructional Systems Division, RCA.	General Faculty Workshop* Mr. Allan Corderman, Dr. Hammons & Mr. Lynn	General Faculty Workshop* Dr. Hammons & Mr. Lynn	General Faculty Workshop* Dr. Hammons & Mr. Lynn	General Faculty Workshop* Dr. Hammons & Mr. Lynn	General Faculty Workshop* Dr. Hammons & Mr. Lynn	General Faculty Workshop* Dr. Hammons & Mr. Lynn	General Faculty Workshop* Dr. Hammons & Mr. Lynn
1:30 p.m.	Discussion Sessions with Dr. Canfield	Discussion Sessions with Dr. Canfield	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings
3:00 p.m.	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings
<b>WEEK OF JULY 21, 1969 TO JULY 25, 1969</b>											
9:00 a.m.	First Presentation: Summary of my Work on Learning Process & the Construction of Teaching-Learning Sequences.	Second Presentation: Focus on Research in Evaluation on Teaching-Learning Experiences.	General Faculty Workshop Dr. Hammons & Mr. Lynn	General Faculty Workshop Dr. Hammons & Mr. Lynn	General Faculty Workshop Dr. Hammons & Mr. Lynn	General Faculty Workshop Dr. Hammons & Mr. Lynn	General Faculty Workshop Dr. Hammons & Mr. Lynn	General Faculty Workshop Dr. Hammons & Mr. Lynn	General Faculty Workshop Dr. Hammons & Mr. Lynn	General Faculty Workshop Dr. Hammons & Mr. Lynn	General Faculty Workshop Dr. Hammons & Mr. Lynn
1:30 p.m.	Discussion Sessions with Dr. Tyler	Discussion Sessions with Dr. Tyler	Divisional Meetings Afterwards	Divisional Meetings Afterwards	Divisional Meetings Afterwards	Divisional Meetings Afterwards	Divisional Meetings Afterwards	Divisional Meetings Afterwards	Divisional Meetings Afterwards	Divisional Meetings Afterwards	Divisional Meetings Afterwards

## APPENDIX A

## REVISED BURLINGTON COUNTY COLLEGE STAFF IN-SERVICE INSTITUTE (Page Two)

1969

TIME:	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
<b>WEEK OF JULY 28, 1969 TO AUGUST 1, 1969</b>					
9:00 a.m.	Presentation: New Patterns of Educational Development. Dr. Carl A. Fields, Assistant Dean, Princeton University Dr. Carl Fields	General Faculty Workshop Dr. Hammons & Mr. Lynn	General Faculty Workshop Dr. Hammons & Mr. Lynn	The Computer at Burlington County College - Mr. Steve Fullum, Director of the Computer Center.	General Faculty Workshop Dr. Hammons & Mr. Lynn
1:30 p.m.	Discussion Sessions with Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings
<b>WEEK OF AUGUST 4, 1969 TO AUGUST 8, 1969</b>					
9:00 a.m.	General Faculty Workshop Dr. Hammons & Mr. Lynn	Divisional Meetings	First Presentation: Toward Innovation in Community Colleges. - Dr. B. Lamar Johnson, Professor of Higher Education - U.C.L.A.	Second Presentation: A Point of View Regarding General Education. Dr. Johnson	General Faculty Workshop Dr. Hammons & Mr. Lynn Followed by Dr. Robert Kirkwood, Middle States Accreditation Association The Accreditation Process. Divisional Meetings
1:30 p.m.	Divisional Meetings	Divisional Meetings	Discussion Sessions with Dr. Johnson	Discussion Sessions with Dr. Johnson	Divisional Meetings
<b>WEEK OF AUGUST 11, 1969 TO AUGUST 15, 1969</b>					
9:00 a.m.	General Faculty Workshop Dr. Hammons & Mr. Lynn	Divisional Meetings	General Faculty Workshop Dr. Hammons & Mr. Lynn	Divisional Meetings	Long Week-end
1:30 p.m.	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Long Week-end
<b>WEEK OF AUGUST 18, 1969 TO AUGUST 22, 1969</b>					
9:00 a.m.	General Faculty Workshop Dr. Hammons & Mr. Lynn	Divisional Meetings	General Faculty Workshop Dr. Hammons & Mr. Lynn	Divisional Meetings	Evaluation of Institute, Dr. Hammons
1:30 p.m.	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings	Divisional Meetings
*Each workshop will either be devoted to a filmstrip-tape presentation on some aspect of the systems approach to instruction or some topic of major concern, such as: A discussion of faculty organizations, academic freedom and responsibility, faculty evaluation, grading practices, etc.					

Burlington County College - Pre-Service Program, August 9-20, 1971  
 Monday, 9 AM - Tuesday, 10 AM - Wednesday, 11 AM - Thursday, 12 PM

9 AM	9 - 9:45 AM	9 AM	9 AM	9 AM	9 AM	9 AM	9 AM
WELCOME: President N. Dean Evans, CB-117	Discussion of "Instructional Systems for Student Learning Materials in CA - The Burlington County College Approach"	Independent Study Time	Division of Learning Resources	Writing objectives	Lunch - your arrangements	NOON (your arrangements)	NOON (your arrangements)
Introduction to Workshop:	Materials in CA - The Burlington County College Approach"	Materials in CA - The Burlington County College Approach"	Materials in CA - The Burlington County College Approach"	General discussion	1 PM	1 PM	1 PM
Dr. James O. Hammons, Dean of the College CB-117	Science/Math, Mr. Baker CA-136	Social Sci., Mr. Lewis CA-220	Business, - Mr. Vail CA-160	Humanities, Mr. Welsh CA-227	Introduction to Independent Study Time	The Learning packet	The Learning packet
10 - 12 Orientation by Division Chairman CB-117	Act. Dean of Instruction CA-254	Print shop discussion and tour: Mr. Thomas, Chairman, Div. Of Learning Resources CA-254	Mr. Douglas, CA-102	Mr. Douglas, CA-102	Independent Study Sequences:	Mr. Douglas, CA-102	Mr. Douglas, CA-102
11 AM	12 NOON	D-108	D-108	D-108	12 NOON	D-108	D-108
12 NOON (entire group) 1 PM	Lunch - your arrangements	1 PM	1 PM	1 PM	12 NOON-Lunch D-108	12 NOON-Lunch D-108	12 NOON-Lunch D-108
Introduction Activities:	Introduction to Independent Study	Writing objectives	Writing objectives	Writing objectives	(your arrangements)	(your arrangements)	(your arrangements)
Mr. Campo, College Counselor	Sequences:	General discussion:	General discussion:	General discussion:	1 PM	1 PM	1 PM
Mrs. Newman, Asst. Professor, speech officer	Mr. Douglas, Educational Development Officer	Mr. Douglas, CA-154	Mr. Douglas, CA-154	Mr. Douglas, CA-154	Seminars:	Seminars:	Seminars:
1 PM	3 PM	3 PM	3 PM	3 PM	Sci/Math - CA-136	Soc. Sci. CA-226	Hum. & Bus. CA-227
Division meetings D-108	Independent Study Time Materials in CA-254	Independent Study Time Materials in CA-254	Independent Study Time Materials in CA-254	Independent Study Time Materials in CA-254	Business CA-102	Business CA-102	Business CA-102

Packet  
Seminars - CA-136  
Soc. Sci. CA-226  
Hum. & Bus. CA-227  
Business CA-102

Packet  
Seminars - CA-136  
Soc. Sci. CA-226  
Hum. & Bus. CA-227  
Business CA-102

Packet  
Seminars - CA-136  
Soc. Sci. CA-226  
Hum. & Bus. CA-227  
Business CA-102

## CONTINUATION

Monday, 16 Burlington County College - Pre-Service Program, August  
 Tuesday, 17 Wednesday, 18

9-20, 1971 (page two)  
 Thursday, 19 Friday, 20

<p><u>9 AM</u></p> <p>Evaluation:  <b>Dr. Pierce</b>  <b>CA-254</b></p> <p><u>9 AM</u></p> <p>Seminar:  <b>The Community College:</b>  <b>Dr. Hammons, CA-279</b></p> <p><u>10:30 AM</u></p> <p>Computer Support:  <b>Mr. Lott, Coordinator of Instructional Computer Services</b>  <b>B-107</b></p> <ol style="list-style-type: none"> <li>1. Services</li> <li>2. CMI</li> <li>3. Validation</li> </ol>	<p><u>9 AM</u></p> <p>Seminar:  <b>The Student in the Comm. College Here and Elsewhere:</b>  <b>Dr. Hammons and Mr. Beatty, Dean of Student Development</b>  <b>CA-279</b></p> <p><u>11 AM</u></p> <p>Introduction of Div. of Student Development and a discussion of their functions:  <b>Mr. Beatty - CA-279</b></p>	<p><u>9 AM</u></p> <p>Division of Learning Resources:  <b>Mr. Belluscio</b>  <b>LB-108</b></p> <p><u>10:30 AM</u></p> <p>Division Meetings:  <b>Sci/Mth - CA-136</b>  <b>Soc. Sci. CA-229</b>  <b>Hum. &amp; F.A. CA-227</b>  <b>Business - CA-160</b></p>	<p><u>12 Noon</u></p> <p>Lunch D-108    (your arrangements)</p>	<p><u>9 AM</u></p> <p>Pre-service Evaluation Session  <b>Mr. Hammons</b></p> <p><u>10:30 AM</u></p> <p>Division Meetings:  <b>Sci/Mth - CA-136</b>  <b>Soc. Sci. CA-229</b>  <b>Hum. &amp; F.A. CA-227</b>  <b>Business - CA-160</b></p>
<p><u>12 Noon</u></p> <p>Lunch D-108    (your arrangements)</p>	<p><u>Independent Study Time</u></p> <p>(Materials available in CA-244)</p>	<p><u>Independent Study Time</u></p> <p>(Materials available in CA-244)</p>	<p><u>Independent Study Time</u></p> <p>(Materials available in CA-244)</p>	<p><u>Independent Study Time</u></p> <p>(Materials available in CA-244)</p>
<p><u>3 - 4 PM</u></p> <p>Seminar:  <b>Evaluation,</b>  <b>Dr. Pierce, CA-254</b></p>	<p><u>3 - 4 PM</u></p> <p>Seminar:  <b>PPIT</b>  <b>Sci/Mth - CA-136</b>  <b>Soc. Sci. CA-229</b>  <b>Hum. &amp; F.A. CA-227</b>  <b>Business CA-160</b></p>	<p><u>3 - 4 PM</u></p> <p>Seminar:  <b>Instructional Development</b>  <b>Sci/Mth - CA-136</b>  <b>Soc. Sci. CA-229</b>  <b>Hum. &amp; F.A. CA-227</b>  <b>Business CA-160</b></p>	<p><u>3 - 4 PM</u></p> <p>Seminar:  <b>System Approach:</b>  <b>Sci/Mth - CA-136</b>  <b>Soc. Sci. -CA-229</b>  <b>Hum. F.A. CA-227</b>  <b>Business -CA-160</b></p>	<p><u>3 - 4 PM</u></p> <p>Seminar:  <b>System Approach:</b>  <b>Sci/Mth - CA-136</b>  <b>Soc. Sci. -CA-229</b>  <b>Hum. F.A. CA-227</b>  <b>Business -CA-160</b></p>

APPENDIX C  
 Burlington County College  
 Pre-Service Program  
 August 10-28, 1970

MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY	
	HOURS		HOURS		HOURS		HOURS		HOURS
9	2	3	4	5	6	7	8		
10	General Session NTL Night Session	11	NTL Tour of Main Campus	12	Pre-test Packet # 1 Writing Behavioral Objectives	13	Packet # 2 Alternate Instructional Strategies	14	Packet # 3 Writing a Learning Packet
16	Writing a Learning Packet LRC Handbook General Session	18	The Community College Division Meeting	19	Packet # 6 The Student Curriculum Development	20	Packet # 7 The Course Syllabus	21	F R E E
23	General Session Packet # 8 The System Approach Handout # 1	24	Packet # 9 Evaluation BCC Handout # 2 Curriculum Development	25	General Session Unique Features of BCC Handout # 3 Curriculum Development	26	General Session Curriculum Development	27	Curriculum Development
									28 Division Meeting Curriculum Development General Session Summary Activities Handout # 4

APPENDIX D

FINAL VERSION OF BURLINGTON COUNTY COLLEGE PRE-SERVICE PROGRAM

The following pages contain the final edited version of the Burlington County College Pre-Service Program. With only one exception (a presentation on the learning packet), all materials needed for another institution to use the program are included or bibliographic references provided. Although a sample evaluation form is not included, one can easily be constructed from a review of the evaluation summaries (Appendices F through I).

SESSION #1

TOPICS INCLUDED IN THIS PACKET ARE:

1. One definition of a systems approach to instruction
2. The components of this systems approach to instruction
3. The theoretical basis of the systems approach to instruction.

RATIONALE:

Essentially, this first session is an introduction to a new way of looking at instruction. As an overview, it prepares you for later units which go into detail regarding some of the subjects which are only mentioned briefly in this unit.

SESSION #1

LEARNING OBJECTIVES

TO ASSIST YOU IN ACHIEVING  
THIS, I SUGGEST THAT YOU:

TO DETERMINE THE EXTENT TO WHICH  
YOU HAVE SUCCEEDED IN ACHIEVING  
THIS OBJECTIVE (AND I HAVE SUC-  
CEEDED IN PREPARING YOU TO ACHIEVI-  
IT) THE FOLLOWING EVALUATION METH-  
ODS AND CRITERIA WILL BE USED:

1. (IN SESSION)  
Define, in your own words,  
the six basic ele-  
ments of the systems  
approach to instruction.
2. (OUT OF SESSION)  
Given a series of twenty  
statements taken  
from Bloom's "Learning  
for Mastery", demonstrate  
your familiarity with the  
theoretical concepts and  
research findings, con-  
tained in that document  
by correctly responding  
to 15 of the 20 as Bloom  
would have responded.

1. Stated in the objective.
2. Stated in the objective.

Read "Learning for Mastery",  
UCLA Evaluation Comment,  
Vol. 2, No. 2, May 1968.

SESSION #1  
SHORT ANSWER QUIZ  
ON  
THE SYSTEMS APPROACH TO INDIVIDUALIZED INSTRUCTION

The six basic elements of the systems approach are listed below. Briefly define each (two sentences or less) in your own words.

1. Rationale
2. Objectives
3. Pre-test
4. Learning activities
5. Post-test
6. Revision

SESSION #1  
"Learning For Mastery"

Below are a number of questions derived from Benjamin Bloom's "Learning for Mastery". Answer each question twice. In the first column, answer each question as you presently believe. Then, in the second column, answer each question as you think Benjamin Bloom would have at the time he wrote "Learning for Mastery".

	YOU	BLOOM
	<u>Agree</u>	<u>Disagree</u>
	<u>Agree</u>	<u>Disagree</u>

1. A good teacher will generally be pleased with a normal distribution of grades; i.e. one-third average, one-third above average and one-third below average. \_\_\_\_\_
2. The major goal of our educational system should be lifelong interest in learning. \_\_\_\_\_
3. The concept of learning for mastery has little significance for affective learning. \_\_\_\_\_
4. Implementation of the concept of mastery learning is dependent upon the specification of the objectives and content of instruction. \_\_\_\_\_
5. The specification of objectives and establishment of standards contributes to the likelihood that students will cooperate and study together. \_\_\_\_\_
6. Courses should be broken into smaller units of learning. \_\_\_\_\_
7. Feedback obtained from formative tests is useful in evaluating media and instructional objectives. \_\_\_\_\_
8. The function of testing is as much to assess teaching as to categorize students. \_\_\_\_\_
9. The concept of mastery logically leads to a credit or no credit grading system. \_\_\_\_\_
10. The quotation, "Nothing is so unequal as the equal treatment of unequals," is compatible with the learning for mastery concept. \_\_\_\_\_

YOU	BLOOM
<u>Agree</u>	<u>Disagree</u>
<u>Agree</u>	<u>Disagree</u>

11. Rewarding experiences in a given field of endeavors tend to increase the length of perseverance in that field. \_\_\_\_\_
12. Given enough time, a sufficient variety of instructional modes, and motivation on the part of the students as many as 95% of the students in a class can achieve mastery. \_\_\_\_\_
13. There is no one best instructional method and combination of media for students enrolled in a course. \_\_\_\_\_
14. The emphasis of a community college should be on learning. \_\_\_\_\_
15. Traditional grading schemes, such as A-F, facilitate learning. \_\_\_\_\_
16. Credits awarded by a college should be based in part on the amount of time spent. \_\_\_\_\_
17. The tutoring of students by other students should be encouraged in community colleges. \_\_\_\_\_
18. Students should be given the opportunity to learn at their own rate even if it takes longer than the suggested time for them to complete the program. \_\_\_\_\_
19. Student performance should be measured on the basis of mastery of learning objectives rather than on the basis of competition with other students. \_\_\_\_\_
20. Our nation requires an education system designed to insure that the optimum proportion of our citizens complete both secondary and community college levels of education. \_\_\_\_\_

Script for Presentation on Systems Approach to Instruction\*

A SYSTEMS APPROACH TO INDIVIDUALIZED INSTRUCTION

This overview of a systems approach to individualized instruction is operational rather than theoretical.

The terminology may be new, but the basic concepts have existed for a long time. The systems approach involves six basic elements: rationale; objectives; pre-test; learning activities; post-test; and revision. This "systems cycle" is used continuously to improve instruction until most students have achieved learning mastery.

Let's examine each of the elements in greater detail.

The rationale explains why it is important (or relevant) for the learner to achieve the objectives. The learner must recognize why it is important that he master the knowledge and skills dealt with in the unit. Without this sense of purpose, learning tasks may become a series of hurdles the student must clear rather than relevant activities. Typically, students find course work relevant if it applies to future academic work in the subject field, relates to job or career interests or enriches their everyday lives.

Objectives provide a sense of direction to a learner's involvement in a unit, a course, or an entire educational program. Specific objectives tell what the learner will be expected to do after instruction that he could not do before. For example, consider the following specific objective: "Given a list of 50 contemporary American authors and a list of 50 novels written by those authors, the learner will correctly match 45 of the novels and authors." Note that this objective

\*This script is a slightly modified version of one used by the National Laboratory for Higher Education entitled "Systems Overview."

## SESSION #1

is stated in terms of what the learner will be able to do ("he will match");

gives the conditions under which he will perform ("Given a list of 50 contemporary American authors and a list of 50 novels written by those authors"); and

states the level of acceptable performance ("correctly match 45 of the novels and authors"). (A mastery level of 90% is expected.)

Objectives suggest how one should collect evidence of learner performance. Consequently specifying learning outcomes will provide for the assessment of learning and enable the user to verify the effectiveness of instruction.

Objectives can be classified as predominantly: (a) cognitive (intellectual processes) such as, "The learner will orally rank order the types of chess pieces in terms of relative power and state the type of move each is allowed to make.;" (b) affective (feelings and attitudes) such as "The learner will elect to play chess rather than engage in other activities."; or (c) psychomotor (perceptual-manipulative skills) such as "The learner will move a rook into a desired position without upsetting other chess pieces on the board."

Specific objectives should suggest the size, duration, scope and grouping of the learning activities. Research indicates that small learning units may be more easily mastered than large units.

A pre-test of learner capability precedes formal instruction. The pre-test, based upon the objectives of the unit of instruction, serves several purposes:

helps to determine where the learner should be placed in the sequence of learning activities so that he is not forced to cover material he already knows;

provides the learner with sample questions which exemplify the stated performance objectives; and

may be used following instruction to review the materials in the unit.

A pre-test score before instruction, compared with a post-test score after instruction, provides tangible evidence of learning. Pre- and post-tests may include not only a variety of paper-and-pencil tests, but also tests of hearing, seeing, and smelling as well as physical performance tests of strength or precision.

Learning activities are means to an end, not ends in themselves. They provide the learner with various practice activities which enable him to master the performance objective. New approaches providing such practice are necessary for many students attending college today. Research indicates that traditional lecture and discussion approaches are relatively ineffective with non-traditional learners (i.e., those learners who are highly dependent and are usually socially, economically, and/or educationally disadvantaged.) Research also indicates that there are different styles of learning, therefore, more than one type of learning activity may be required to assure that each learning unit is effective.

Opportunities to practice learning activities must be provided a student while he is engaging in learning activities. Practice activities should be similar to those responses required on the post-test. Learning can be defined as a change in behavior--the learner will act in certain ways that were totally underdeveloped or partially developed before instruction took place. Teaching has been traditionally defined in terms of activities by the teacher. An emerging definition, however, is

that teaching is the management of activities which produce measurable learning. No longer is teacher presentation of course content considered to be synonymous with learning. Under a systems approach to individualized instruction, the teacher's role shifts to that of the manager of the learning environment.

If measurable learning has not occurred, one might infer from the definition just given that the instructional process has not been adequate.

Since the focus is on the ends of instruction (what the learner will be able to do after instruction) rather than on the means of instruction (what the teacher will be doing during instruction), the teacher is automatically in a position to assume accountability for the results. A note of caution is interjected here. Accountability for student learning must be shared by instructors, by students, by administrators, by trustees, and others whose support is essential. The prerequisite of accountability is that the teacher must have access to resources which are essential to managing the learning environment. Note also that the specification of objectives and learning activities provides a rational basis for student accountability.

A vital element of a systems approach to individualized instruction is the post-test which measures attainment of the objective. Through systematic evaluation one determines how successful instruction has been. Measurable evidence of learning is the best documentation of the effectiveness of teaching. Testing is thus used primarily to assess the effectiveness of instruction, and not merely to categorize students.

## SESSION #1

There are many different approaches to evaluation. Some differ considerably from traditional testing procedures used in education. Persons involved in the assessment of learning should be aware of these new procedures.

Consider the difference between the norm-referenced approach to evaluation and the criterion-referenced approach. The norm-referenced approach assumes that there is a normal distribution of student aptitude, skills, knowledge, and competencies. Evaluation, using the normal curve as a guide, assigns grades by comparing students with each other. Test scores are ranked, and then grades A through F are assigned to these categories. Using a normal curve for grading predestines a percentage of students to failure, no matter how effective instruction has been. In criterion-referenced testing, a standard of acceptable learner performance is established when the objectives are stated. Learner performance is then compared with that standard. Those who equal or exceed the standard have achieved mastery at a prescribed level and move on to the next unit. Those who have not achieved the minimum level of performance are allowed to continue their study of the same materials, or of parallel materials and may take an alternate version of the post-test without penalty.

A systems' approach to individualized instruction encourages a criterion-referenced approach to evaluation. If learners perform poorly on a post-test, it means they have not yet mastered the objective or that practice provided was not sufficient or appropriate. Thus, unacceptable grades by a substantial percentage of students symbolize instructional failure, rather than learner failure.

## SESSION #1

The concepts of John E. Carroll and Benjamin S. Bloom provide a theoretical basis for a systems approach to individualized instruction. Carroll contends that aptitude may be defined as the amount of time required to learn something. Bloom contends that mastery of a subject can be achieved by a high percentage of the learners in any class, if they are given sufficient time and appropriate types of help. Most learners are capable of mastery, and an effective instructional system should accommodate this concept.

If mastery learning does not occur, instruction must be revised and the learner recycled through these or other learning activities until he demonstrates mastery of the performance objectives. Instruction that fails to cause learning must be revised until it becomes an effective teaching tool. The best data for revising instructional materials are obtained from students. An analysis of test items missed and interviews with students provide two sources of revision data. The learner's attitudes toward the learning activities are also an integral part of the revision process. What has been achieved if the student, while mastering the content of a course, never wants to use what he has learned? As an example, a student in a developmental English class made this statement: "Last week in English 099 we had to write an in-class theme on 'What a Daffodil Thinks of Spring'. I tried but I just couldn't get going. Anyway I think the whole thing was just a waste of time." This statement suggest that much more attention needs to be given to student attitudes. This instructional workshop stresses the need for affective or attitudinal objectives, as well as cognitive and psychomotor objectives.

TOPICS INCLUDED IN THIS PACKET ARE:

1. Factors teachers should consider in making instructional decisions.
2. The importance of writing learning objectives.
3. Definition and characteristics of behaviorally stated instructional objectives.
4. Practice in identifying each of the three components of a well-stated learning objective.
5. Practice in identifying technically correct learning objectives.
6. Practice in rewriting poorly stated objectives.
7. Differences between cognitive, affective, and psychomotor objectives.
8. Differences between student and class performance standards and practice in identifying and developing student and class performance standards for properly stated objectives.

RATIONALE:

A behavioral objective is a statement of instructional intent. It communicates what the learner is to be like when he has successfully completed a learning experience.

Of all the skills you will develop during this workshop, LEARNING HOW TO WRITE VALID BEHAVIORAL OBJECTIVES IS THE MOST IMPORTANT. At the conclusion of this unit, you will be able to formulate operationally stated learning objectives. It is impossible to design successful instructional objectives or select appropriate materials, content, sequences or instructional methods until the outcomes are defined in advance. It is similarly impossible to evaluate your students or your instruction unless the purposes of instruction are clearly stated.

In short, "IF you don't know where you are going, how will you know when you get there?"

PRE-TESTS:

Some of you may have already mastered the material included in this packet. To determine if you already possess an acceptable level of knowledge regarding this, you may want to go immediately to the self-test on pages 55-57 in Mager and the mastery tests on pages 115-124 in Poplau. Use 85% as the minimum level of acceptable knowledge.

## LEARNING OBJECTIVES

TO ASSIST YOU IN ACHIEVING  
THIS, I SUGGEST THAT YOU:

TO DETERMINE THE EXTENT TO WHICH  
YOU HAVE SUCCEEDED IN ACHIEVING  
THIS OBJECTIVE (AND I HAVE SUC-  
CEEDED IN PREPARING YOU TO ACHIEVE  
IT) THE FOLLOWING EVALUATION METHOD  
AND CRITERIA WILL BE USED:

## (AT HOME)

You will write an essay re-  
sponse (not more than two  
pages) to the question be-  
low, incorporating in your  
answer the main components  
of the instructional model  
described on sp. 7-20.

"What factors should a teacher  
consider in making instruc-  
tional decisions; in other  
words, the decision-making  
scheme you think appropriate  
for an instructor."

## (AT HOME)

a. Without references, state  
at least three reasons  
why instructors should  
state objectives.

b. Without references, write  
the definition (as stated  
in this packet) for a  
behavioral objective.

c. Without references, state  
the three main character-  
istics of a behavioral  
objective and give a  
brief explanation of each.

## 1.

Work through pp. 6-22 of  
Establishing Instructional  
Goals, by W. James Popham  
and Eva L. Baker.

1. Bring your written response  
to this question with you to  
the session. I will review  
them and return them with my  
comments at our next meeting.

Additionally, you may be  
called on to diagram and  
explain the main components  
of the instructional model  
on page 20.

## 2. (AT HOME)

a. Read Chapter Two in Pre-  
paring Instructional  
Objectives by Robert  
Mager.

## 2. (AT HOME)

a. Complete question one on  
the enclosed quiz.  
b. Complete question two on  
the enclosed.

c. Complete question three  
on the enclosed quiz.

## LEARNING OBJECTIVES

TO ASSIST YOU IN ACHIEVING  
THIS, I SUGGEST THAT YOU:

TO DETERMINE THE EXTENT TO WHICH  
YOU HAVE SUCCEEDED IN ACHIEVING  
THIS OBJECTIVE (AND I HAVE SUC-  
CEEDED IN PREPARING YOU TO ACHIEVE  
IT) THE FOLLOWING EVALUATION METHOD  
AND CRITERIA WILL BE USED:

- d. Distinguish accurately between written objectives stated in terms of student behavior and those not so stated.
- d. Read pages 23-38 in Establishing Instructional Goals.
- e. Given a list of objectives, identify the behavioral terms, the conditions and the standards.
- e. Read Preparing Instructional Objectives.
- f. Given a list of objectives, rewrite those that are not stated in behavioral terms.
- f. Read pages 22-38 in Establishing Instructional Goals.
- g. Given a list of objectives, distinguish correctly between cognitive, affective, and psychomotor objectives.
- g. Read pages 40-58 in Establishing Instructional Goals.
- d. Complete question five on the enclosed quiz and complete the test on pages 117-118 in Establishing Instructional Goals. For further practice, complete the test on pages 55-57 of Mayer's, Preparing Instructional Objectives.
- e. Successful performance on question 4 of the attached test.
- f. Answer question 6 of the attached test, plus complete the test on page 117 of Establishing Instructional Goals.
- g. Complete the test on page 119 in Establishing Instructional Goals.

## LEARNING OBJECTIVES

TO ASSIST YOU IN ACHIEVING  
THIS, I SUGGEST THAT YOU:

TO DETERMINE THE EXTENT TO WHICH  
YOU HAVE SUCCEEDED IN ACHIEVING  
THIS OBJECTIVE (AND I HAVE SUC-  
CEEDED IN PREPARING YOU TO ACHIEVE  
IT) THE FOLLOWING EVALUATION METHOD  
AND CRITERIA WILL BE USED:

- h. Given properly written cognitive objectives you will (from memory) classify them as recall, or higher than recall, in Bloom's Taxonomy of Cognitive Objectives.
  - h. Read pages 41-58 in Establishing Instructions.
  - h. Complete the test on page 119 in Establishing Instructional Goals.
- i. On an attitude inventory, achieve a post instruction score that reflects a positive attitude toward objectives which are both behavioral and important.
  - i. Read pages 41-58 in Establishing Instructions.
  - i. Complete the test on pages 121-122 in Establishing Instructional Goals.
- j. Given a properly stated objective; identify those portions of it, if any, which:
  - j. Read pages 61-79 in Establishing Instructions.
  - j. Complete the test on pages 123-124 in Establishing Instructional Goals.
- 1. describe a student performance standard,  
2. specify the class performance standard.

LEARNING OBJECTIVES

TO ASSIST YOU IN ACHIEVING  
THIS, I SUGGEST THAT YOU:

- TO DETERMINE THE EXTENT TO WHICH  
YOU HAVE SUCCEEDED IN ACHIEVING  
THIS OBJECTIVE (AND I HAVE SUC-  
CEEDED IN PREPARING YOU TO ACHIEVE  
IT) THE FOLLOWING EVALUATION METHOD  
AND CRITERIA WILL BE USED:
- 
- k. Write a properly stated  
instructional objective,  
then develop class per-  
formance standards for  
a hypothetical class  
of 30 students using  
both qualitative and  
quantitative criteria.
- k. Read pages 61-79 in  
Establishing Instructional Goals.
- 
- k. The group will be broken  
into small teams of three  
and each member will be  
asked to present his work  
to the other members of  
the team who will critique  
it.

LEARNING OBJECTIVES

TO ASSIST YOU IN ACHIEVING  
THIS, I SUGGEST THAT YOU:

TO DETERMINE THE EXTENT TO WHICH  
YOU HAVE SUCCEEDED IN ACHIEVING  
THIS OBJECTIVE (AND I HAVE SUC-  
CEEDED IN PREPARING YOU TO ACHIEVE  
IT) THE FOLLOWING EVALUATION METHOD  
AND CRITERIA WILL BE USED:

To: Student Name:

1. Score 70% or better on pages 23-76 in Introducing Instructional  
Processes. Complete the testatory tests on page 12-13.
2. Review Objectives and complete Post Test on page 15-16.
3. Complete the attached test covering objectives  
2, a, b, c, d, e, and f and bring it to the session

SESSION #2  
TEST ON OBJECTIVES 2.A-F

1. Cite at least three reasons why instructors should state objectives.
2. Define behavioral objective.
3. Name the three main characteristics of an instructional objective and briefly explain each one.
  - A. \_\_\_\_\_
  - B. \_\_\_\_\_
  - C. \_\_\_\_\_
4. Read each of the following objectives. Circle the behavioral term. Underline the conditions. Draw a wavy line under the standards. If the conditions and/or standards are not stated, record that information in the space provided.
  - A. Given the formula  $ax^2 + bx + c$ , where a, b, and c, are constant rational numbers, the student will calculate the value of the algebraic expression for any value of x for a set of ten problems.  
\_\_\_\_\_
  - B. The student will write five compound-complex sentences.  
\_\_\_\_\_
  - C. The student will diagram a simple sentence, placing the subject, predicate, and modifiers in the correct position with 100% accuracy.  
\_\_\_\_\_

D. Given a diagram of a generalized tape recorder the student will correctly label all of the following:

- 1) Volume control
  - 2) On-off switch
  - 3) Volume or record-level indicator
  - 4) Tone control
  - 5) Tape threading slot
  - 6) Forward or play control
  - 7) Rewind control
- 

E. Given a group of figures, the student will draw a circle around the parallelograms.

---

F. The student will construct a parallelogram whose sides are 2" and 4" in length.

---

G. Given a grammatically correct sentence, the student will underline and label the following:

- |                     |                       |
|---------------------|-----------------------|
| 1) Adjective clause | 5) Gerund             |
| 2) Adverb clause    | 6) Infinitive         |
| 3) Noun             | 7) Participial Phrase |
| 4) Verb             |                       |

Five out of seven must be correct

---

H. The student will list four major pieces of legislation that were passed in the United States during the Progressive Era (1900-1917).

---

I. The student will spell the word "sublimation".

---

5. Given a 16mm Bell and Howell projector and film, the student will thread the projector in 5 minutes.

---

5. Label the following objectives.

A = adequate

NA = not adequate

- A. The student will explain Ohm's Law.
  - B. The student will explain, in writing, the difference between voltage, current, and resistance with respect to Ohm's Law.
  - C. The student will write an essay about World War II.
  - D. Given samples of the three basic kinds of rock formations, the student will place the samples into three separate piles.
  - E. Given a 2 1/4" by 2 1/4" twin lens reflex camera and a roll of pan X 120 film, the student will set the shutter speed at 1/500 second and take 12 "stop fast action shots".
6. Objectives are always written in behavioral terms; that is, they must contain an action verb. If any of the following statements do not meet this requirement, rewrite the statement in behavioral terms.
- A. The student will grasp the significance of the Brest-Litovsk Treaty.
  - b. The student will name four Shakespearean tragedies.

- C. The student will understand T.S. Eliot's poem "The Wasteland";
- D. The student will know Newton's three laws of motion;
- E. The student will thoroughly comprehend the relationship between "supply and demand" with respect to Keynesian economics.
- F. The student will list the five principle parts of speech.
- G. Given a diagram of a cell, the student will label the following: nucleus, nuclear membrane, nucleolus, cytoplasm, and cell membrane.
- H. The student will operate a bunsen burner.
- I. Given an inadequate objective, the student will realize that it is not stated in behavioral terms.
- J. The student will write an exposition of character including all of the following: choosing a subject with definite traits, letting the person explain himself by his own words and actions, and making the various characteristics of your subjects serve to present one predominant impression.

TOPICS INCLUDED IN THIS PACKET ARE:

1. Differences between interim objectives and sub-objectives and their use
2. Some of the uses of learning objectives, interim objectives, and sub-objectives
3. Practice in recognizing test items appropriate to the evaluation of objectives
4. Criterion tests and their relationship to learning objectives
5. Practice in writing objectives and matching criterion items

RATIONALE:

Up until now, we've been dealing primarily with theory, with little opportunity for practice. You've become familiar with the systems approach; you've learned how to identify, classify, and rewrite learning objectives. In this packet you are exposed to the importance of writing test items which are appropriate for specified learning objectives. This packet also lets you practice in actually writing objectives and matching test items.

## LEARNING OBJECTIVES

TO ASSIST YOU IN ACHIEVING  
THIS, I SUGGEST THAT YOU:

TO DETERMINE THE EXTENT TO WHICH  
YOU HAVE SUCCEEDED IN ACHIEVING  
THIS OBJECTIVE (AND I HAVE SUCC-  
CEEDED IN PREPARING YOU TO ACHIEV-  
E IT) THE FOLLOWING EVALUATION CRITERIA  
AND CRITERIA WILL BE USED:

<p>1.</p> <p>1. (IN SESSION)</p> <p><u>Items a-f</u></p>	<p>1. (IN SESSION)</p> <p><u>Items a-e</u></p> <p>As You view the presentation, you will be asked to complete Worksheet I covering objectives a-e.</p>
<p>a. Explain what should be done with an objective that appears to be too large and complex or consist of too many kinds of activities.</p> <p>b. Explain the primary difference between an interim objective and a sub-objective.</p> <p>c. Given an instructional objective select sub-objectives that are critical for completion of the terminal Performance requirements.</p> <p>d. Write a brief statement describing why instructional technologists feel there is value in giving objectives to the student.</p> <p>e. Write a brief statement describing why instructional technologists feel that objectives are necessary and valuable for the teacher.</p>	<p>(This presentation is an adaptation of Unit 4 in <u>Principles and Practices of Instructional Technology</u> by General Programmed Teaching.</p>

## LEARNING OBJECTIVES

TO ASSIST YOU IN ACHIEVING  
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YOU HAVE SUCCEEDED IN ACHIEVING  
THIS OBJECTIVE (AND I HAVE SUC-  
CEEDED IN PREPARING YOU TO ACHIEVE  
IT) THE FOLLOWING EVALUATION METHOD  
AND CRITERIA WILL BE USED:

- f. Write one objective for which sub-objectives and interim objectives might be appropriate. Then develop necessary sub-objectives and interim objectives and label them as such.

- f. Twenty minutes will be allotted for you to develop your objective, sub-objective, etc. It will then be duplicated in three copies. The group will be broken into teams of three members and each member's work will then be reviewed by the other two members.

## (IN SESSION)

- a. Describe in writing the advantage in developing criterion test items before developing objectives.

## (IN SESSION)

Items a-d

Attend slide-tape presentation.

- b. List the three primary functions of the criterion test.

(This presentation is an adaptation of Unit 5 in Principles and Practices of Instructional Technology by General Programmed Teaching.

- c. Given a list of objectives and test items, distinguish between appropriate and inappropriate test items. For any test item which is not appropriate, explain why it is not appropriate.

## 2. (IN SESSION)

Items a-d

As you view the presentation, you will be asked to complete Worksheet II covering objectives a-d. Complete Mager's self-test on pages 58-59 to his specifications.

NOTE: Before the session, you might want to review pages 33-43 in Preparing Instructional Objectives By Robert Mager

LEARNING OBJECTIVES

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YOU HAVE SUCCEEDED IN ACHIEVING  
THIS OBJECTIVE (AND I HAVE SUCC-  
CEEDED IN PREPARING YOU TO ACHIEVE  
IT) THE FOLLOWING EVALUATION METHOD  
AND CRITERIA WILL BE USED:

- d. Given an instruc-  
tional goal, write  
four objectives and  
four relevant cri-  
terion test items.

## WORKSHEET I

## INTERIM AND SUBOBJECTIVES

1. What should be done with an objective that appears to be too large, complex and to consist of many kinds of activities?

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---

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2. What is the primary difference between an interim objective and a subobjective?

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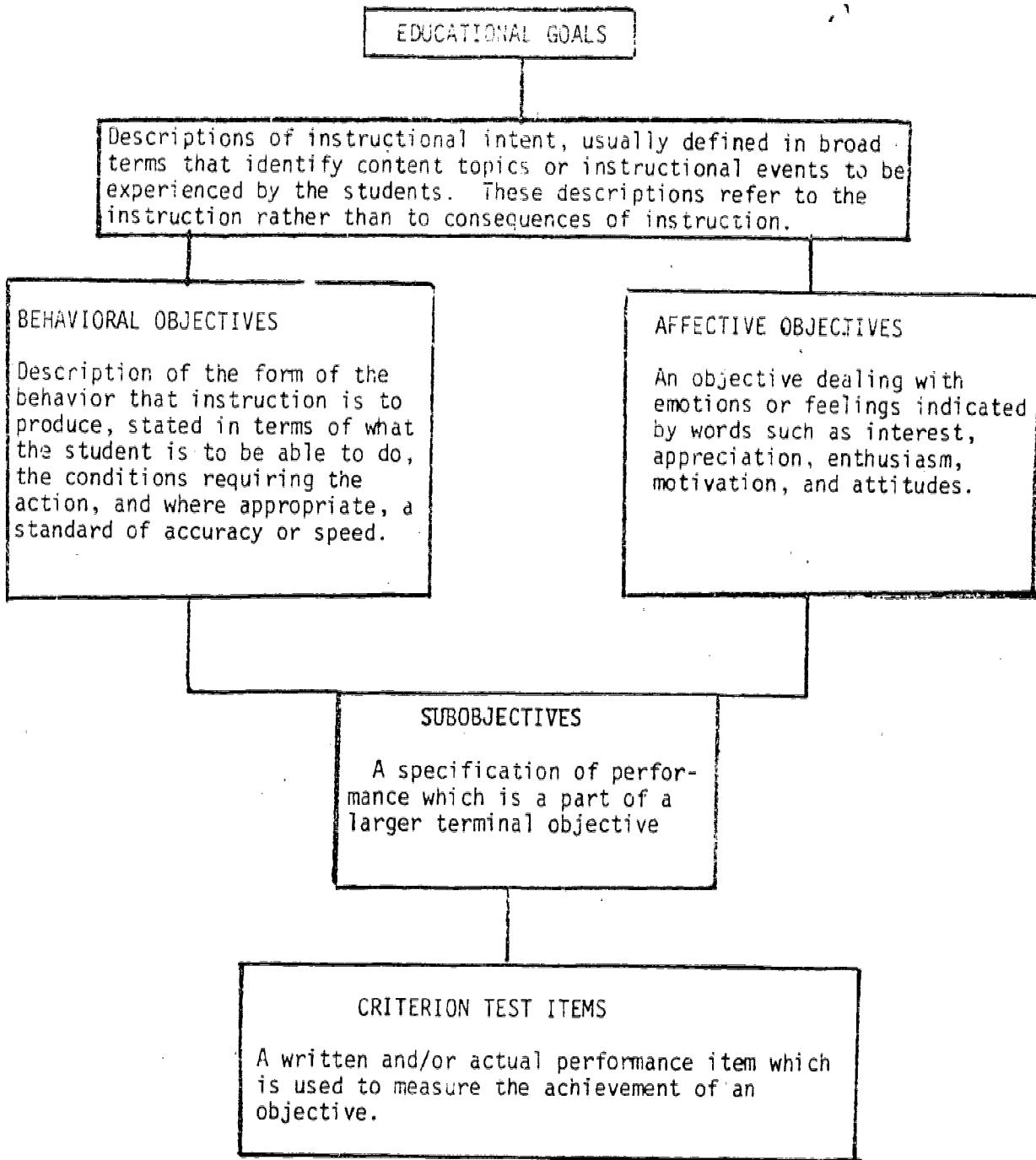
---

3. Read the following instructional objective and select the subobjectives that are critical for completion of the terminal performance requirements.

Instructional Objective: Given a pattern, the student will fasten the pattern to the material, trace the interior design from the pattern to the material, and cut out a duplicate following the pattern outline.

Subobjectives:

- A. The student will fasten the pattern on the material.
- B. The student will select the proper tool to trace the interior design from the pattern.
- C. The student will trace the design.
- D. The student will describe the procedure of reproducing a copy from a pattern.
- E. The student will select the proper tool for cutting the duplicate from the pattern.
- F. The student will cut out the duplicate from the pattern outline.



4. Describe briefly why we feel that objectives are so necessary and valuable for the teacher.

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---

---

5. Describe briefly why we feel there is value in giving our objectives to our students.

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NOTES:

## SESSION #3

## WORKSHEET II

## CRITERION TEST MEASURES

	<u>OBJECTIVE</u>	<u>TEST ITEM</u>
<u>A.</u>	Fill in form	Fill in form
<u>B.</u>	Operate calculator	Operate this calculator
<u>C.</u>	Adjust microscope	Name adjustment parts of a microscope
<u>D.</u>	Write the equation for Ohm's Law	Write the equation for Ohm's Law
<u>E.</u>	Solder connections	Indicate which connections are acceptable
<u>F.</u>	Explain use of micrometer	How is the micrometer used?
<u>G.</u>	Use the compass	Which way is north?
<u>H.</u>	Select the definition for "interaction"	Which of the following is the definition of "interaction"?
<u>I.</u>	Explain function of a prism	List, in order, the colors of the spectrum
<u>J.</u>	Describe a micrometer	Measure this
<u>K.</u>	Define "laser"	Explain how a ruby laser works

2. What would be the advantage in writing criterion test items before developing objectives? \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

3. List the three primary functions of the criterion test.

A. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

B. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

C. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

NOTES:

4. Read the following brief statements of objectives and test items and decide whether the corresponding test items are appropriate or inappropriate. If they are appropriate, place a check beside the item. If they are inappropriate, state why.

<u>OBJECTIVES</u>	<u>TEST ITEM</u>
____ A. Cite orally the five largest cities in the world	Name the five largest cities in the world
____ B. Trace the flow of blood through the heart on a diagram	Describe the structure of the heart
____ C. Select the equipment needed for a given chemistry experiment	Select the proper equipment for this chemistry experiment
____ D. Locate a malfunctioning tube in a radio	What meter is used to test radio tubes?
____ E. Define "objective"	Define "objective"
____ F. Deliver a five minute extemporaneous speech	Describe how to organize for an extemporaneous speech

5. A new course, based on objectives and a criterion test, has undergone a series of tests and revisions. All students score about 95% on the criterion test, but only 31% can perform the task. What's wrong? \_\_\_\_\_

**6. Instructional Goal**

The student will know how to punctuate sentences, following conventions and rules regarding acceptable use of the period, comma, colon, semicolon, question mark, exclamation point, quotation marks, apostrophe, etc., both from the point of view of mechanical usage and to clarify and emphasize intent of each sentence.

**Write four objectives for the goal described above.**

- A. \_\_\_\_\_  
\_\_\_\_\_
- B. \_\_\_\_\_  
\_\_\_\_\_
- C. \_\_\_\_\_  
\_\_\_\_\_
- D. \_\_\_\_\_  
\_\_\_\_\_

**Write four test items for the above objectives.**

- A. \_\_\_\_\_  
\_\_\_\_\_
- B. \_\_\_\_\_  
\_\_\_\_\_
- C. \_\_\_\_\_  
\_\_\_\_\_
- D. \_\_\_\_\_  
\_\_\_\_\_

### OBJECTIVES

- A. Given four sentences, the student will correctly punctuate them using the colon, semicolon, and the quotation mark.
- B. Given four sentences, the student will punctuate those that should be punctuated with a colon and those that should be punctuated with a semicolon. This should be done without error.
- C. The student will be able to write a paragraph correctly illustrating at least five uses of the comma.
- D. The student will be able to write the rule for use of the exclamation point.

### CRITERION TEST ITEMS

- A. Punctuate these four sentences using the colon, semicolon and the quotation mark as required.
- B. Punctuate these four sentences using the colon and semicolon as required.
- C. Write a brief paragraph illustrating at least five uses of the comma.
- D. Write the rule for use of the exclamation point.

Session #3

Script for Slide-Tape Presentation on  
Criterion Test Measures

In this unit we are going to discuss development of the criterion test as it relates to testing for the specified performance required in the objective. Development of the criterion test is as important as development of the objectives--they should balance each other.

A criterion situation means a situation that lets the student demonstrate the criterion performance, the performance that he must take with him. The objective describes this criterion situation, and what he does. Let's look at the three primary functions of the criterion test/....

A criterion test, like the objectives, should be written to help design instruction. This is the first primary function of a criterion test--to show us what we must teach so we can design the instruction.

And we want to be sure when our student leaves us that he can perform as he should. The final test that the student takes should tell us whether or not he can perform. This is the second primary function of a criterion test--to determine the student's ability to perform the course requirements.

And the third function, as you can guess, is the evaluation of the instruction. If we start out with a criterion test, we try to teach every student to score 100 per cent on the test. So we use the test to evaluate our success.

The three functions, then, are: one, as a design document to help us to design instruction; two, to determine ability to

perform; three, to evaluate instruction. If it can't do all three, it is not an adequate criterion test.

Why do we call it a criterion test rather than an achievement test or progress test?

Because we measure every subobjective on a criterion test, while an achievement test usually only samples the total objectives. We want to include everything that the student should learn in our criterion test. And we teach everything in our criterion test.

An achievement test for 100 objectives might sample only 25 of them, or 50 of them. A criterion test measures them all. Does that mean that a set of 100 objectives or subobjectives requires a test containing 100 items? no--it does not-- There is no requirement on the number of items, only that every objective be tested.

An important thing to remember is that criterion test items are valid only if they measure the critical performance stated in the objective.

For example, the objective states: The student will name the three departments of the U.S. Government provided for by the Constitution.

The test item states: Describe the three departments of the U.S. Government provided for by the Constitution.

The test item does not test the performance stated in the objective.

The student learned to name the three departments of the U.S. not describe them. Would it be fair to test him on a performance which the objective did not require? Classifying the objectives

and test items means we must "match" the performance requirements. Let's look at some examples.

Look at Item 1 on your worksheet. Here is a list of simplified objectives and test items. Look at the first five. In the space beside each letter, put a check mark if you think the test item measures the performance specified in the objective. When you have finished restart the presentation.

Look at Item A--the objective and the test item are identical. You should put a check by the letter. Now, look at Item B. Item B is also a match and you should check it. How about Item C? The objective asks the student to adjust the microscope while the test items calls for the student to name the adjustment parts of a microscope. We would not check C because the test item does not measure the objective--only a subobjective. By itself, this test item is inadequate. Remember that the subobjective is a critical part of the objective and we do test for it, but the testing of a subobjective for the objective is not an adequate measurement of the terminal performance requirement.

Item D--the objective and the test item match. Check mark this item.

Item E--We would not check this item since the test item measures only one subobjective.

Now, for the remaining items on this page, classify the objectives and test items and put a check mark if the performance requirements match and would adequately test the objectives.

Item F--the objective and test item match. Check mark F.

Item G--the objective asks that the student use a compass.

Although this is rather vague, it is reasonable to assume that

a student who could use a compass would be able to tell you where North was. The objective specifies discrimination and so does the test item. We would check this item.

Item H--the objective directs the student to select and the test item is also discrimination. Check this item.

Item I--objective requires the student to explain. The test item that directs the student to list the performance requirements, are not the same. The student might be able to list, in order, the colors of the spectrum, but the objective specified that he be able to explain the function of a prism. Do not check mark Item I.

Item J--the objective asks the student to describe. The test item requires the students to measure. Do not give this item a check mark.

Item K--Here again, the performance requirements of the objective and test items do not match. Do not check mark this item. Let's look at Item C again. We said that the test item would measure the performance requirement of a subobjective--let's clarify that. The objective reads: "The student will be able to adjust a microscope." This is an objective that contains subobjectives. A test item on only one of the subobjectives would not test the student's ability to complete the terminal performance.

A subobjective might specify: "The student will name adjustment parts of a microscope." And the test item for this subobjective might be: "Name adjustment parts of a microscope." Performance requirements match. When an objective has more than one type of performance classification, we may need to develop and test all subobjectives.

Item E is also an example of the test item testing a subobjective and not the primary performance requirement.

There are two procedures that can be used when developing objectives and criterion test items.

-----  
The objectives can be developed, critical performances identified and classified, and criterion test items written--designed to measure all performance requirements specified by the objectives.

This procedure requires careful analysis of the objectives to identify subobjectives that should be taught and tested.

Or, if criterion test questions are developed first, we can identify behavior that is critical for terminal performance, and then write objectives that set conditions and standards for performance.

Thinking in terms of the question or questions which must be answered to complete the performance requirements helps us design instruction.

We must not lose sight of the purposes for which we develop a criterion test. A criterion test helps to design instruction. It helps to determine the students' ability to perform course requirements.

And, a criterion test helps evaluate instruction.

The three functions are inseparable, for the criterion test must adequately do all three.

But our main concern is the design of instruction.

The test will guide our later lesson planning, and all presentations.

The objectives are descriptions, the test items are the details,

and the lesson plans specify the interactive instruction required to achieve the objectives.

Now Answer Questions 2 and 3 on Your Worksheet.

-----

Developing criterion test questions first helps identify all critical performance requirements necessary for terminal performance. They help us design objectives that set conditions and standards for performance.

The primary functions of the criterion tests are:

- A. To help us design instruction
- B. To help us determine the students' ability to perform, and
- C. To help us evaluate instruction.

If you decide to test an objective in any form other than that described in your objective, check to see if your test item is appropriate. See if it measures the capability you want to measure. For example, if you want to use a written test, and use multiple-choice or true-false items, you'd better check to see if a multiple-choice item effectively measures the students' ability to discuss or explain or manipulate or perform or whatever the objective specifies. And check your essay questions to be sure that explanations, definitions, and discussions accurately test your objectives.

Earlier we discussed validated instruction--instruction which has been shown to do what it was intended to do, to change performance capability according to the specifications

included in the instructional objectives.

Look at item 4 on page 3. Read the objectives and decide whether the corresponding test items are appropriate or inappropriate. If they are inappropriate, explain why.

-----

Item A. The objective requires the student to "cite".

The test item states "name".

The performance requirement of the test item is appropriate.

Item B. Objective--behavioral requirement "trace".

The test item requires the student to "describe".

This test item is inappropriate because the classifications don't match.

Item C. No revision is needed. The test item specifies the behavioral performance stated in the objective.

Item D. The test item might test a subobjective, but is not appropriate as a test item for the objective.

Item E. Test item is appropriate.

Item F. Test item inappropriate.

The student has been required to describe how to organize for an extemporaneous speech. The test item is inappropriate because it does not measure the behavioral requirement stated in the objective.

Now read Item 5. What's wrong? Everybody gets high scores on the criterion test, and objectives were used,

but only 31 per cent can perform the task. (Assume for now that the test items are not faulty). Write your answer.

Apparently there is something wrong with the objectives. Either some critical ones are missing, or are incorrect, and we're teaching incorrect procedures. In any case, we've been teaching things well, but what we have been teaching is evidently not relevant to the task.

Go on to Item 6 on page 4. Read the specification of the instructional goal.

From the instructional goal, develop four criterion test items and four objectives.

When you have finished this exercise, compare your objectives and test items with the examples shown on your worksheet.

THIS IS THE END OF THIS PROGRAM.

Session #3

Script for Slide-tape Presentation on Interim and Subobjectives

This presentation deals with interim and subobjectives. At the conclusion of this program, you will be expected to:

1. Explain what should be done with an objective that appears to be too large and complex or consists of too many kinds of activities.
2. Explain the difference between an interim objective and a subobjective.
3. Given an instructional objective, select the subobjectives that are critical from completion of the terminal performance requirements.
4. Write a brief statement describing why instructional technologists feel there is value in giving objectives to the student.
5. Write a brief statement explaining why instructional technologists feel that objectives are necessary and valuable for the teacher.

\*An interim objective is taught so that student will have a temporary "crutch".

In most cases, as skill develops, and as the student practices a motor performance or series of steps, the need for the verbal telling himself how will disappear. He won't have to look it up or tell himself.

Sometimes these interim objectives don't disappear but continue to be a crutch. For example, the name Roy G. Biv is a memory device for remembering the colors of the spectrum--red, orange, yellow, green, blue, indigo, and violet.

And some people, when trying to decide how many days there are in a given month, have to say to themselves--30 days has September, April, June, and so on.

An interim objective is not a terminal objective; it is a temporary behavior, taught only to help the student reach the terminal behavior.

A subobjective is quite different from an interim objective. A subobjective is part of a behavioral objective, a step or activity that is a component of the larger objective.

For example, we might have an objective calling for the calculation of the lowest common denominator. A subobjective might say this--the student will be able to locate and name the denominator in common fractions.

If he cannot locate it he can't do anything else with it. And we have him locate and name it so he learns what to call it, when telling himself what to do, or when asking questions or answering questions.

A subobjective for a terminal objective calling for the student to set the shutter and diaphragm of a camera might be teaching him to load the camera, or read a light meter.

And when we run into an objective like, "Repair a microscope," or "Produce a blueprint," we see that the objectives are too large to work with,

so we break them down into smaller pieces each of which we call a subobjective of the larger objective.

---

Refer to your worksheet: Answer questions 1 and 2. Then restart the presentation.

The answer to question 1 is simply--break it down into its components.

Question 2 asks "What is the primary difference between an interim objective and a subobjective?" The primary difference is in terms of what we teach, test, and expect at the end of instruction. Interim objectives we do not look for at the end of instruction, since they are included only to get the student to the terminal behavior. A subobjective, however, is a part of a terminal objective and we do expect it to occur at the end of instruction, and we do test for it. Any time an objective seems to include a combination of more than one kind of performance, you probably have too large an objective and need to break it down into subobjectives that are easier to manage.

Read item 3 and select the subobjectives that are critical for completion of the terminal performance requirements. Then re-start the presentation.

You should have selected items A, B, C, E, and F. Item D--"The student will describe---" is not required by the broad objective. The student might be able to describe the procedure correctly, but would you test him by asking him to describe? Verbal performance is not the critical requirement and should not be required as a test item unless stated in the objective.

On page 2 of your workshop is a diagram which represents relationships of objectives. We start with course goals, then objectives, then the identification of subobjectives and test items that match the critical performance requirements of the broad behavioral objectives.

Take time to study the diagram now. Then re-start the presentation.

We have been identifying the behavioral requirements of instructional objectives, classifying performance requirements, identifying subobjectives and classifying their performance requirements, and at this point several questions might arise--"Why go into this much detail?"--"How does developing and classifying behavioral objectives assist the teacher?"--and--"How do these objectives help the student?"

The main function of objectives is the effective communication of the intent of instruction. We often ask students if they have any questions and we try to get as much feedback as we can.

But suppose we get a response like this. The student says he understands--would you necessarily believe him? As far as something

firm to go on, you would probably not take this word for it. You would test him so you could compare his performance to that described by the objective.

But test time is too late. How do we help the student evaluate his own progress so that he can tell when he needs to ask for help--and so he has some basis for seeing his own progress? If we give the students the objectives in advance, they have a better idea of where they are going.

Suppose we give the students the objectives. What might happen? The objectives, if complete, tell the student where he is going and how to tell when he gets there.

We'd also give him all the necessary study materials, since the objectives tell him what to look for and what to do with it.

We'd provide him with access to an instructor so he can obtain information from that source when he needs it.

We'd provide him access to whatever he needs--including people who have already achieved the objectives, so he can obtain information from that source when he needs it.

We'd provide him access to whatever he needs--including people who have already achieved the objectives, so he can see what they do and how, and get any information he needs from them.

Individualized instruction, allowing each student to proceed at his own pace, can work successfully under these conditions.

And for group scheduled courses, objectives may be the most useful thing we can give the students, because they are better

able to direct their attention to the critical information and be able to evaluate their own progress.

Turn to page 3 of your worksheet and answer questions 4 and 5. Then re-start the presentation.

Objectives are necessary and valuable to the teacher because the teacher can decide exactly what he wants his students to learn to do, and from these performance requirements the teacher can select all necessary content to help the students achieve the desired performance. And students, given objectives, are better able to tell where they are going, how well they are progressing, and when they need help. Objectives also help them direct their attention to the relevant kinds of information made available to them. S T O P !

This is the end of the presentation on interim and subobjectives.

## SESSION #4

### TOPICS INCLUDED IN THIS PACKET ARE:

1. Questions regarding the use of behavioral objectives
2. Arguments against the use of behavioral objectives
3. Continued practice in writing learning objectives and matching test items

### RATIONALE:

Thus far, there has been little time for questions regarding the use of, and usefulness of, behaviorally stated objectives to improve instruction. Let's pause and seriously examine the whole question of using behaviorally stated objectives to improve instruction. The readings included with the packet offer a good beginning point. Come prepared to get it off your chest! On the other hand, if by now, you have become convinced of the validity of their use, this session will help prepare you to deal with the many questions you will receive from students, colleagues and community personnel.

This packet also provides continued practice in writing learning objectives and criterion referenced test items. Hopefully, this amount of practice will be sufficient to get you started on your own.

LEARNING OBJECTIVES

TO ASSIST YOU IN ACHIEVING  
THIS, I SUGGEST THAT YOU:

TO DETERMINE THE EXTENT TO WHICH  
YOU HAVE SUCCEEDED IN ACHIEVING  
THIS OBJECTIVE (AND I HAVE SUC-  
CEEDED IN PREPARING YOU TO ACHIEVE  
IT) THE FOLLOWING EVALUATION METHOD  
AND CRITERIA WILL BE USED:

Given one of the eleven reasons stated (in Popham's article) for not writing objectives in terms of measurable learner behaviors, you will, in your own words, restate the arguments used by Popham to refute each objection.

1. (AT HOME)

Read, "Probing the Validity of Arguments Against Behavioral Goals" by W. James Popham. (Utilization Guide, Vimcet Associates, pgs. 17-24, 1969.)

1. (IN SESSION)

At random, group members will be called on to refute one of the eleven objectives cited in Popham's article. (If you disagree with Popham, be prepared to state why).

After reading the article "Implications of the Process" identify those questions which are of concern to you and come prepared to discuss them in class. (Also come prepared to raise any other questions which you might have).

2. (IN SESSION)

Read Art Cohen's "Implications of the Process" (Objectives for College Courses, Glencoe Press, pgs. 73-82, 1970.)

2. (AT HOME)

At random, group members will be called on to answer one of the several questions cited in Cohen's article.

3. (AT HOME)

a. You will select a unit from your teaching field and write three technically correct behavioral objectives appropriate to the unit.

3. (IN SESSION)

a&b. The group will be broken into small teams of three, and your objectives and test items will be reviewed in terms of:

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THIS OBJECTIVE (AND I HAVE SUC-  
CEEDED IN PREPARING YOU TO ACHIEVE  
IT) THE FOLLOWING EVALUATION METHOD  
AND CRITERIA WILL BE USED:

- b. For each objective written above, you will write a test item appropriate to measuring achievement of that objective.
- A list of action verbs is enclosed for your use.

- Do they meet the three criteria for behavioral objectives?
- Are the test items consistent with the stated objectives?

SOME POSSIBLE VERBS FOR USE IN STATING **COGNITIVE** OUTCOMES\*

<u>Knowledge</u>	<u>Analysis</u>	<u>Evaluation</u>
define	distinguish	judge
memorize	analyze	appraise
repeat	differentiate	evaluate
record	appraise	rate
list	calculate	compare
recall	experiment	value
name	test	revise
relate	compare	score
underline	contrast	select
	criticize	choose
	diagram	assess
<u>Comprehension</u>	inspect	estimate
	debate	measure
restate	inventory	
discuss	question	
describe	relate	
recognize	solve	
explain	examine	
express		
identify		
locate		
report		
review		
tell		
<u>Application</u>		
translate		
interpret		
apply		
employ		
use		
demonstrate		
dramatize		
practice		
illustrate		
operate		
schedule		
shop		
sketch		

Synthesis

compose  
plan  
propose  
design  
formulate  
arrange  
assemble  
collect  
construct  
create  
set up  
organize  
manage  
prepare

\* Compliments of Marybelle Savage

SESSION #5

TOPICS INCLUDED IN THIS PACKET ARE:

1. A definition of a learning packet; the rationale for its use, an explanation of the components of a learning packet, and the criteria used to evaluate learning packets.
2. The history and philosophy of the community college.

RATIONALE:

The learning packet communicates to the student the following: (1) learning objectives; (2) the means by which learning objectives can be achieved; and, (3) the means used to evaluate learning experiences. This unit provides an introduction to the packet. This will prepare you to later write a learning packet for a unit on one of the courses you teach.

This packet also provides a basic foundation in the history and philosophy of the community college. Hopefully, it will serve to answer many of your own questions as well as prepare you to cope with many of the questions you receive from students and from people in the community.

SESSION #5

LEARNING OBJECTIVES

TO ASSIST YOU IN ACHIEVING  
THIS, I SUGGEST THAT YOU:

TO DETERMINE THE EXTENT TO WHICH  
YOU HAVE SUCCEEDED IN ACHIEVING  
THIS OBJECTIVE (AND I HAVE SUCC-  
CEEDED IN PREPARING YOU TO ACHIEVE  
IT) THE FOLLOWING EVALUATION METHOD  
AND CRITERIA WILL BE USED:

(IN SESSION)

Define a learning packet.

1-7. Attend presentation.

List the seven components of  
a learning packet.

(IN SESSION)

1-7. During the presentation, you  
will be asked to complete a  
worksheet measuring achievement  
of the objectives.  
  
(This presentation is  
essentially a lecture,  
using overhead trans-  
parencies.)

If called on, verbally de-  
scribe the components of a  
learning packet as you would  
explain them to a student.

State in your own words at  
least five advantages to us-  
ing learning packets.

From memory, diagram the  
learning packet flow chart  
and the instructional sys-  
tems model. Summarize  
the differences and  
similarities between the  
two.

LEARNING OBJECTIVES

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THIS OBJECTIVE (AND I HAVE SUC-  
CEEDED IN PREPARING YOU TO ACHIEV-  
E IT) THE FOLLOWING EVALUATION METI  
AND CRITERIA WILL BE USED:

6.

From a list discussed in the  
group meeting, state at least  
eight helpful hints to writing  
learning packets.

7.

State at least two ways  
of distinguishing learning  
packets from learning pack-  
ages.

8.

Use the criteria from learn-  
ing packets covered in this  
unit to evaluate three sam-  
ple packets. Six of the  
seven components of each  
packet must be properly  
labeled "usable or not  
usable".

8.

As stated.

When you have finished, pick  
up an answer sheet from the  
instructor and score your  
responses.

9.

(BEFORE SESSION)

Objectives relating to His-  
tory and Philosophy are in-  
cluded in the History and  
Philosophy packet.

Covered in the Packet.

SESSION #5

WORKSHEET

1. Define Learning packet.
2. List the seven components of a learning packet.

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_

f. \_\_\_\_\_

g. \_\_\_\_\_

3. State at least five advantages in using learning packets.

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_

4. Reproduce the instructional systems model and the learning packet flow chart in the space below.

Instructional Systems Model

Learning Packet Flow Chart

Summarize the differences and similarities between the two below.

Similarities:

Differences:

5. State in your own words at least eight helpful hints to writing learning packets.

6. State at least two ways of distinguishing learning packets from learning packages.

## THE COMPREHENSIVE COMMUNITY COLLEGE

The concepts included in this packet all relate to increasing your background in the comprehensive community college. Included are such topics as:

### Concepts

1. The philosophical basis for the community college.
2. Historical development of the community college.
3. Accepted purposes of the community college.
4. The growth of the community college during the 1960's.
5. Occupational education in the community college.

### Rationale

If you are like most of the new faculty in a community college you have had little, if any previous experience working in a community college, and probably have never taken a course or read one of the basic books about the community college. Consequently, you probably have a number of rather basic questions about this and other community colleges like:

1. Will this college eventually become a four-year college?
2. What is the difference between a community college and a junior college?
3. How is a community college different from a four-year college?

It is the purpose of this packet to provide you with a number of basic readings about the community college which will answer these and other similar questions. Your understanding of the community college and its history and purposes is essential if you are to become an effective spokesman and advocate of it.

### Specific Learning Objectives

You will not be expected to memorize minute details, or recall the five purposes for community colleges for regurgitation on a written exam. As a faculty member in a community college, that is not the way these questions are put to you. It is much more likely to be over a cup of coffee in the snack bar, after a class, while chatting with a student, or over a drink at a neighborhood party. Therefore, to simulate reality, you will be expected to actively participate in one of several small group discussions and respond to several questions. These discussions will be conducted as follows:

1. You will be assigned to a small group of three to six persons.
2. A group leader will be selected from among the group.
3. Discussion topics will be drawn from those listed on a deck of 5" x 8" cards. Approximate times for each topic are shown.
4. Following the small group discussions the groups will reassemble into one large group for an open discussion of related topics led by your instructor.
5. The other group members will rate your response using a scale of 1 - 5, with 1 being very weak and 5 being very clear.

The topics are as follows:

(1, pp32-44)

1. Thornton states that there are at least five basic principles on which community colleges are founded:
  - a. What are these principles?
  - b. In your own words what does each mean?
  - c. Which ones do you agree, disagree with, and why?

(2, pp45-57)

(4, pp3-21)

(5, pp8&9)

2. Some authors believe that the development of the community college has evolved in four stages:
  - a. 1850-1920
  - b. 1920-1945
  - c. 1945-1960
  - d. 1960-1970

What are three of the distinguishing characteristics of each of the stages?

(3, pp58-70)

3. Although there are numerous purposes stated for community colleges, most of these can be classified under one of the following:
  - a. Occupational education of a post high school level.
  - b. General education for all categories of students.
  - c. Transfer or pre-professional education.
  - d. Part-time education.
  - e. Community service.
  - f. The counseling and guidance of students.

Explain in your own words what each of these means. (Imagine that you are speaking to persons who know little, if anything, about community colleges.)

- (6, pp35-48) 4. Most students, and seemingly, all parents feel that four years of college is a must. In your reading, you have learned that at least one-half of the jobs in the 1970's will be for persons with one or two years of college. Later, in the packet on students in community colleges, you will find that four years of college is an unrealistic goal for 60-70% of the students who enter community colleges.

Imagine that you are talking to a civic group on the topic "Education Offerings of Community Colleges". Explain the vocational, occupational or, as we call them, career curriculums offered by community colleges.

Pretest If, after looking over the above list of discussion topics, you feel that you could spend the time better doing something else, you may arrange to be excused by arranging a conference with your instructor. He will question you on several of the topics at random and if your answers are acceptable, you will be excused.

Learning Resources From an infinite number of potential sources, readings have been selected. With one exception the readings are excerpts from some of the more widely used books on the community college. They are:

1. "Philosophical Basis of the Community Junior College"
2. "Historical Development of the Community Junior College"
3. "Accepted Purposes of the Community Junior College"

The above are chapters 3, 4, and 5 respectively from James W. Thornton Jr.'s The Community Junior College (John Wiley & Sons, Inc., New York, 1966).

4. "The Context of Community Higher Education"

Chapter one in Edmund J. Gleazer, Jr.'s This is the Community Junior College (Houghton, Mifflin Company, Boston, 1968).

5. Two tables, "Growth in Proportion of Population Served by State, 1960-1970", and "Growth in Enrollment and Number of Colleges by State, 1960-1970".

These were taken from the 1971 Junior College Directory (American Association of Junior Colleges, Washington, D.C., 1971).

6. "Planning for Occupational Education" and "Types of Occupational Programs"

Chapters 2 and 3 in An Introduction to American Junior Colleges, (American Council on Education, Washington, D.C., 1962).

SESSION #6TOPICS INCLUDED IN THIS PACKET ARE:

1. Writing Learning packets.
2. The student in the community college.

RATIONALE:

As will be pointed out in the presentation, writing learning objectives and criterion test items are crucial to any effort aimed at improving instruction. However, to be of maximal use, they must be transmitted to the student. The Learning Packet does this.

Although the packet on students includes a rationale for that topic, a further word might be in order. Instruction is causing learning in students. To be effective as an instructional technique, a community college, it is essential to have a good working knowledge of the students attending the institution. This packet is designed to furnish new and old faculty with basic information regarding students in community colleges in general.

LEARNING OBJECTIVES

TO ASSIST YOU IN ACHIEVING  
THIS, I SUGGEST THAT YOU:

TO DETERMINE THE EXTENT TO WHICH  
YOU HAVE SUCCEDED IN ACHIEVING  
THIS OBJECTIVE: (AND I HAVE SUC-  
CEEDED IN PREPARING YOU TO ACHIEVE  
IT) THE FOLLOWING EVALUATION METHOD  
AND CRITERIA WILL BE USED:

Write a learning packet con-  
taining the following com-  
ponents:

- a. concepts
- b. rationale
- c. learning objectives
- d. pre-test
- e. learning activities/  
resources
- f. post-test
- g. revision data sheet

It should be no more than  
four pages and must meet the  
criteria previously outlined  
for a learning packet. For-  
mat is your decision - just  
be sure that the format  
facilitates ease of reading.

1. (OUT OF SESSION)

Review your notes from  
the preceding session and  
use the packets given you  
for the workshop as a  
guide.

1. (IN SESSION)

Your packet will be dupli-  
cated and at least two  
other persons in the group  
will review it. An accept-  
able package will be one  
which the reviewers indi-  
cate as being usable based  
on their opinion of student's  
ability to use it.

2.

The students in the com-  
munity college.

(Covered in the packet.)

Covered in the packet.

2.

Covered in the packet.

## STUDENTS IN COMMUNITY COLLEGES

Rationale "New faculty, particularly those who have never taught in a two-year college, have minimal knowledge of the abilities, needs and interests of junior college students. Seldom are they aware of the socio-economic backgrounds and life styles of their students and the implications these have for success or failure in the teacher-student relationship and the resultant learning."<sup>1</sup>

Now is that for a rationale statement? Seriously, lack of evidence on student characteristics has been one of the major problems in the development of educational programs realistically geared to student needs. All too often decisions affecting students have been made on the basis of erroneous assumptions about students.

Concepts It shall be the purpose of this package to provide you with a working knowledge of the most recent data about students who attend community colleges in general and one in particular.

The package focuses on three different topics:

1. The similarities and differences among students in community colleges, those in four-year colleges and universities, and those who, after graduation from high school, decide not to pursue post-high school education. Also considered will be the so called "new" student now attending community colleges -- the student who previously did not pursue higher education.
2. Community college students who transfer to four-year colleges versus native students.
3. Known data about students at one community college.

Included under topic one will be:

A comparative profile of community college students, and high school graduates who choose not to pursue post-high school education.

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<sup>1</sup> Orientation for Faculty in Junior Colleges, M. Frances Kelley and John Connelly, American Association of Junior Colleges, Washington, D.C., 1970, p. 54.

Academic characteristics	education and occupational aspirations
Social economic background	
Family financial background	Participation and non-academic achievement
Self-concepts	Financial status
Interests and personality characteristics	Community and allocation of time problem
Reasons for attending college	Predominant choices of vocation and major fields of study

Topic two will cover such things as:

Comparative statistics regarding community college students who transfer to four-year colleges and native students in those institutions. Specifically, attention will be focused on the following:

Achievement of degree goals	Social, economic and academic comparisons with native students
Attrition after transfer	
Differences among colleges	Grade-point differentials

Topic three attempts to familiarize you with the ACT test which is the primary student data-gathering instrument used at many community colleges. From it information is obtained regarding:

Academic potential	Non-academic achievements
Education aspirations	
Student personnel needs	Demographic data

#### Learning Strategies

Several different techniques will be employed to assist you in accomplishing the objectives of this package. The first technique is a selected list of five, very carefully screened readings. They incorporate better than 90% of the useful data now known about community college students.

The second technique employed calls for you to work through a self-instructional package dealing with the nature and purposes of the ACT test and some basic data about students at one community college.

Following successful completion of these, you will participate in a seminar discussion focusing on the readings and the data contained in the package. At that time there will also be an opportunity for further questions.

Learning Objectives

In addition to successful completion of and participation in the learning strategies discussed above, you will be expected to score 80% or better on a short objective quiz (post-test) covering the material found in the readings and the self-instructional package.

Pre-Test

If after reading this far, you feel that you can test out of this package, please take the post-test referred to above. A score of 80% or about exempts you.

Readings:

1. The Junior College Student - A Research Description; K. Patricia Cross (Educational Testing Service, Princeton, New Jersey, 1968.)
2. "Students' Attitudes Toward Community Colleges"; Irving L. Slade (reprint; New York State Personnel and Guidance Journal, Vol. 3, No. 1, 1968.)
3. "Focus on the Transfer Program"; Dorothy M. Knoell (Junior College Journal, May, 1965.)
4. "The Junior College Transfer Student"; Terry O'Banion (Junior College Research Review, American Association of Junior Colleges, October, 1969.)
5. "Students and the Two-Year College"; Chapter 5, from (The Two-Year College: A Social Synthesis, Blocker, Plummer, Richardson, Prentice-Hall; New Jersey, 1965.)
6. "New Students of the 70's"; K. Patricia Cross (The Research Reporter, University of California, Berkeley; Vol. VI, No. 4, 1971.)

Other:

7. Self-Instruction Package entitled "ACT Data" (Burlington County College, 1971.)

Attached is the Pre-Test (and Post-Test) for the non-Acc portion of the Students in Community Colleges packet.

There are 37 possible points. A score of 72 or better on either the pre-test or the post-test will mean satisfactory mastery.

For your use, answers to the test are given below:

PART A: 14 Points - Matching      PART C: 13 Points - Multiple Choice

- |          |       |
|----------|-------|
| A 1.     | a 60  |
| B 2.     | b 62. |
| C 3.     | c     |
| C 4.     | d 63. |
| A,B,C 5. | e     |
| A,B 6.   | f     |
| A 7.     | g     |
| A 8.     | h     |
| A,B 9.   |       |
| A 10.    |       |

PART B: 60 Points - True-False

- |       |       |         |          |
|-------|-------|---------|----------|
| T 11. | T 26. | T 42.   | T a. 57. |
| T 12. | T 27. | T 43.   | F b.     |
| T 13. | T 28. | T 44.   | F c.     |
| T 14. | F 29. | T 45.   | T d.     |
| T 15. | T 30. | T 46.   | T e.     |
| T 16. | T 31. | T 47.   | T g. 58. |
| T 17. | T 32. | T 48.   | F b.     |
| F 18. | F 33. | T 49.   | T c.     |
| F 19. | T 34. | F 50.   | F a. 59. |
| F 20. | F 35. | T 51.   | T b.     |
| T 21. | F 36. | F 52.   | T c.     |
| T 21. | T 37. | T 53.   |          |
| T 22. | F 38. | T 54.   |          |
| T 23. | T 39. | T 55.   |          |
| T 24. | T 40. | T a. 56 |          |
| T 25. | T 41. | T b.    |          |
|       |       | T c.    |          |
|       |       | T d.    |          |

PART A: 14 Points - Matching

Below is a list of twelve statements. Read each statement then identify it with the following three type (s) of students which it best describes. In some instances a statement may describe more than one kind of student.

- A. Community College Student who graduated from a community college and then transferred to a four-year institution.
  - B. Community College Student, who transferred to a four-year college without graduating from a community college.
  - C. Native student of senior college/university.
- \_\_\_\_\_ 1. Approximately 75% will achieve their Baccalaureate Degree by the end of their fourth year after transfer. (3:6)\*
- \_\_\_\_\_ 2. Chances for success in achieving a Baccalaureate Degree are least likely. (3:6)
- \_\_\_\_\_ 3. In general, has the highest academic aptitude of all. (3:7)
- \_\_\_\_\_ 4. Grades tend to improve steadily throughout four-year program; with best performance during junior and senior years. (3:7)
- \_\_\_\_\_ 5. Male, White, Protestant, with American born parents. (3:7)
- \_\_\_\_\_ 6. Parents are more likely to have less education with the students. (4:11)
- \_\_\_\_\_ 7. Normally experiences the loss of half a letter grade between sophomore and junior year. (4:11)
- \_\_\_\_\_ 8. Tends to achieve midway between the other two types. (4:11)
- \_\_\_\_\_ 9. Rates guidance and counseling better on junior college campus than four-year. (4:11)
- \_\_\_\_\_ 10. Grades tend to drop at the beginning of the junior year. (4:11)

PART B: 60 Points - True-False

- T-F 11. Children of upper socioeconomic families regardless of ability, are much more likely to attend college than children of low socioeconomic status. (1:15)

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\* The figures in parenthesis at the end of each statement refer to the source and page number from which the question was taken.

- T-F 12. On the basis of traditional test of academic ability, it can be stated that the mean score for students attending four-year colleges exceeds that of students in two-year coll. etc., and that two-year college students score higher as a group than high school graduates who did not go to college. (1:11)
- T-F 13. Students reflect rather faithfully their interests and concerns of their parents. (2:39)
- T-F 14. Students going to junior colleges come from the second, third, or lowest quartiles of ability. (1:14)
- T-F 15. Students tend to reflect rather faithfully the interests of their parents in their taste in magazines and music, and the extent to which they discuss current affairs. (1:17)
- T-F 16. The attitude of parents regarding college attendance has a profound effect upon whether students go to college, what type of college they attend, and how long they stay. (1:17)
- T-F 17. Finances are of much more concern to community college students than four-year college students. (5:19)
- T-F 18. Research indicates that the presence of a community college in a community does not affect the percentage of high school graduates who go on to college. (1:20)
- T-F 19. The percentage of entering students at four-year institutions who are 19 or older is the same as that for junior college students, 15 percent. (1:14)
- T-F 20. The presence of a junior college in a community normally does not increase the percentage of bright students from low socioeconomic levels who enter college. (1:29)
- T-F 21. A new junior college in an area normally results in a statistically significant increase in the proportion of the total population attending college. (1:21)
- T-F 22. Research findings are rather conclusive in revealing that accessibility of college has a particular impact upon students from lower socioeconomic levels. (1:21)
- T-F 23. Students attending community colleges are less likely to receive parental encouragement to attend college than are students who are attending four-year colleges. (5:17)
- T-F 24. The typical junior college student body will have substantial numbers of students with ability equal to that of better students in four-year colleges. (1:13)
- T-F 25. Research indicates that many students attend junior colleges because they are uncertain of their interests and motivation for a four-year degree program.
- T-F 26. Senior college students are more likely to be interested in humanitarian concerns whereas junior college students seem to be somewhat more concerned about financial matters. (1:30)

- T-F 27. Approximately one-third of community college students change their occupational choice during their two years. (1:38)
- T-F 28. More than any other item, marriage and family relationships are considered the greatest source of life satisfaction by high school graduates today. (1:32)
- T-F 29. Behavior of college students appears unrelated to interests. (1:30)
- T-F 30. In general junior college students are more conventional and less tolerant than their peers at four-year institutions. (1:32)
- T-F 31. Students who select junior colleges do so for reasons different than those used by senior college students in selecting a four-year college. (1:34)
- T-F 32. Community college students feel rather strongly that the main reason for continuing their education beyond high school is to prepare for a job that pays well. (1:36)
- T-F 33. In general, educational and occupational aspirations of both junior and senior college students are quite similar. (1:42)
- T-F 34. The student of today is not likely to finish a Bachelor's degree in four years. (1:50)
- T-F 35. Junior college students tend to be more sure about what they want to do while in high school than senior college students. (1:44)
- T-F 36. There is reason for believing that junior colleges are serving the needs of vocationally oriented students better than those of academically oriented students. (1:50)
- T-F 37. Junior college students appear to be more unsettled about future plans than either four-year college or non-college groups. (1:50)
- T-F 38. Most young people express no need for help in planning their futures. (1:50)
- T-F 39. Educational aspirations of junior college students tend to be unrealistically high. (1:42)
- T-F 40. There is a strong inverse relationship between a student's high school average and what he thinks about a community college. (2:1)
- T-F 41. Students enrolled in community college vocational programs tend to have a positive attitude about their community college enrollment. (2:1)
- T-F 42. The community a student comes from greatly affects the way a student feels about community college attendance. (2:2)
- T-F 43. High school faculty members exert a tremendous influence on the way a student views community college attendance. (2:2)
- T-F 44. Commuting students and "live-in" students view college life quite differently. (2:2)
- T-F 45. Parents of community college students tend to think of their children as

still being in high school. (2:2)

- T-F 46. Whereas young people from the upper socioeconomic levels tend to see college as an opportunity for intellectual stimulation and the development of the mind, children from lower socioeconomic families are more likely to see a college education as the pathway to better jobs and upward social mobility. (1:17)
- T-F 47. One of the most critical problems facing community colleges is that of redirecting students whose vocational aspirations are highly unrealistic. (1:46)
- T-F 48. Junior college freshmen have generally lower personal motivation and less academic ability as measured by standardized tests. (5:114)
- T-F 49. Proportionately more two-year college students come from lower socioeconomic backgrounds than do their counterparts in four-year colleges and universities. (5:114)
- T-F 50. Student career decisions are largely fixed when they enter college. (5:118)
- T-F 51. Junior college students are quite concerned about being emancipated from home and parents. (5:119)
- T-F 52. On the average, there are no differences between part-time evening and full-time day students in community colleges. (5:125)
- T-F 53. In general a small minority of students account for most of the participation in student activities. (5:126)
- T-F 54. Women students beyond the age of 25 often become the academic leaders on campus. (5:128)
- T-F 55. The majority of students seek the two-year college as an opportunity for upward social and economic mobility. (5:128)
- T-F 56. Transfer students from junior colleges tend to rate the following aspects of their junior college program quite highly. (1:37)
- T-F      a. Faculty knowledge of subject matter
- T-F      b. quality of teaching
- T-F      c. adequacy of the range of courses
- T-F      d. adequacy of counseling and guidance services.
- T-F 57. Many of the students now attending community colleges represent a group of students who would not have attended college in the 1950's and 60's. Which of the following categorize the family background of the so-called non-traditional, or "new" student?
- T-F      a. Two-thirds are first generation college students (6:2)
- T-F      b. One-third of their fathers are blue collar workers (6:2)
- T-F      c. Over half are black. (6:2)
- T-F      d. More likely to be female than male. (6:2)
- T-F      e. Increasing numbers are likely to come from relatively "advantaged" families. (6:2)

58. Which of the following statements are true regarding the previous educational experience of the "new" student in the community college?

$$\tilde{L} = \tilde{L}'$$

- a. He (she) will have been increasingly unsuccessful as he moved up through grades K-12. (6:2)
  - b. Previous negative experiences will have caused the "new" student to become rather indifferent about education. (6:2)
  - c. Is more likely to be quite nervous about school than other students. (6:2)

$$T = i^*$$

- b. Previous negative experiences will have caused the "new" student to become rather indifferent about education. (6:2)

$$\mathbf{R} = \mathbf{F}$$

- c. Is more likely to be quite nervous about school than other students. (6:2)

59. Which of the following statements accurately describe the attitudes and values of the "new" student?

T-F

- a. "New" student's perspectives of life and learning and not significantly different from those held by traditional college students. (6:3)

T-F

- b. New students are not as interested in intellectual pursuits as are other college students (5:3)

c. The attitude of

T-F

- c. The attitude of "nei" students toward such things as the authority of American institutions, the virtues of hard work, etc., tend to reflect a stereotype normally associated with blue collar backgrounds. (6:3)

PART C: 13 Points - Multiple Choice

60. Which of the following are commonly given as reasons by most students for selecting a community college rather than a four-year college. (1:34-37)

- a. low cost
  - b. uncertainty about future goals
  - c. felt unprepared for senior college work
  - d. proximity
  - e. academic reputation
  - f. curricular offerings
  - g. good faculty

61. As a group, junior college students are less confident than senior college students on which of the following characteristics. (1:26)

- a. academic ability
  - b. artistic ability
  - c. athletic ability
  - d. drive to achieve
  - e. mathematic ability
  - f. intellectual self-confidence
  - g. leadership ability
  - h. writing ability

62. Approximately \_\_\_\_ of the students attending community colleges are married. (5:103)
- a. one-tenth
  - b. one-fourth
  - c. one-half
  - d. three-fourths
63. Approximately what percent of the students attending community colleges are male? (5:108)
- a. 50%
  - b. 25%
  - c. 75%
  - d. 60%
64. Based on nationwide studies, what percent of community college students hold outside jobs? (5:108)
- a. 10%
  - b. 25%
  - c. 50%
  - d. 75%

SELF-INSTRUCTIONAL PACKAGE

Instructor's Name	<u>Dr. James O. Hammons</u>
Institution:	<u>Burlington County College</u>
Course Title:	<u>Pre-Service Prog: am</u>
Intended Learners:	<u>New Faculty</u>
Topic:	<u>ACT Data</u>
Approximate Working Time of Student	<u>30 Minutes</u>

BURLINGTON COUNTY COLLEGE

Pemberton, New Jersey

PRE-TEST

1. Please select the correct answer(s). The ACT is not:

- A. An intelligence test.
- B. An attitude test.
- C. An achievement test.
- D. A measure of academic potential.

2. Three purposes for administering the ACT test are:

- A.
- B.
- C.

3. Name the four tests which comprise the ACT battery.

- A.
- B.
- C.
- D.

4. The five scores to be obtained from the ACT are: (list)

- A.
- B.
- C.
- D.
- E.

5. Below are various group norms for Burlington County College students and those of other groups. From these statistics what conclusions would you draw regarding the Burlington students?

Comparison of BCC ACT Scores and Those of Other Groups

	BCC (1970)	BCC (1969)	National Norms	Entering Freshmen In Junior College (1970)	Entering Freshmen In N.J. Junior College (1970)
Mean ACT Composite	17.4	15.9	19.4	7.9	16.9
English (Mean)	16.1	14.8	18.5	16.8	15.8
Math (Mean)	16.6	14.5	18.8	17.6	16.3
S.S. (Mean)	18.2	17.1	19.8	17.8	17.2
Nat. Sci. (Mean)	18.0	16.8	20.1	19.0	17.7

ANSWERS TO PRE-TEST

1. A., B., C.

2. To provide an estimate of student potential

To assist the college in determining how its students compare with students in other colleges.

To assist the college in placing students in appropriate courses.

To assist the college in identifying the need for special curriculum needs such as developmental courses, honor courses, etc.

3. English, Math, Social Science, Natural Science

4. English usage, Mathematics usage, Social Science Reading, Natural Science Reading, and composite.

5. A satisfactory answer is one which demonstrates:

A. The ability to distinguish if Burlington students are substantially lower, or higher than the other groups on which data is furnished.

Answers To Pre-Test (continued)

- B. The ability to infer from this possible implications for the structure of the curriculum; recruiting of students; trends regarding the kinds of students Burlington is now admitting as compared to those who enrolled in previous years.

## ACT TEST DATA

### Introduction

For reasons which will be cited, the college deemed it necessary to utilize one of a number of nationally known tests which measure the academic potential of entering students. The American College Test (ACT) was selected because it was felt that it out performed all of its competitors.

To maximally utilize the data which can be obtained from this test, it is important that you, as a faculty member, be familiar with the kinds of information which are available from it.

### Objectives

In a later package you will learn how to interpret the test results of a particular student. This package is concerned with familiarizing you with group data and the general nature of the test itself. As a result of completing this package, you will be expected to:

1. State whether the ACT is a test of intelligence, attitude, achievement of academic potential.
2. List at least three purposes for administering the ACT.
3. Name the four tests which comprise the ACT battery.
4. Name the five scores to be obtained from the ACT.
5. Analyze data comparing BCC students with that of other groups and point out possible implications of these differences for the college.

## Activities

As indicated in the introduction, the ACT is a test of comparative academic potential. It is not an intelligence test, attitude test, or achievement test.

Intelligence tests measure the raw brain power of an individual, and are based on the ability of a person to perform given tasks as compared with other persons his age.

Attitude tests attempt to measure the way a person feels about something.

Achievement tests are indicators of past achievement and are useful for placing students at appropriate grade levels. The ACT is none of these, in that it only attempts to give the student an indication of his potential for success at a given school, in certain courses, based on the performance of students with test scores and high school grades like his.

Please demonstrate your understanding of the difference between tests of academic potential, attitude, achievement, and intelligence by matching the following tests with the appropriate use:

- |                                    |  |
|------------------------------------|--|
| <u>      1. Intelligence Tests</u> | A. Placing students at the appropriate grade level in reading.                           |
| <u>      2. Interest Tests</u>     | B. Determining student preference.   |
| <u>      3. Academic potential</u> | C. Determining if a 10 year old student is more intelligent than his 10 year old sister. |
| <u>      4. Achievement Tests</u>  | D. Determining the probability of success in a given course, based on known data.        |

ANSWERS: 1. C  
2. B  
3. D  
4. A

The reasons colleges administer tests of academic potential like the ACT are many. For instance, some colleges require scores above a certain cut-off, on the assumption that students who achieve beyond that point have a high probability of success, while students with scores below that have a sufficiently high probability of failure that admittance would be questionable. ACT data is useful in assisting a college compare its student body with that of other colleges, or groups of students. Test data can also help in determining changes in the ability of the student population over a period of time. For example, at BCC, the average scores of students the first, second, and third year differ considerably. Another application of the ACT is counselors who use data from it in helping students make realistic vocational goals. A student desiring to major in math and science who has extremely low potential can be told the odds against his achieving success. This of course does not mean that he can not succeed, but that his chances for success are less than students with higher scores. Colleges can often analyze test data and use the results to determine the need for special programs such as developmental English, math, etc. Some colleges, like BCC, use data to assist counselors in placing students in courses for which they have a 50-50 chance of success, while channeling them into lower level courses when the probability for success is less.

In the preceding paragraph, some of the reasons for administering the ACT have been listed. Below, state in your own words, at least three uses of the ACT test data. To check your answers, refer to the preceding paragraph.

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The ACT battery consists of four sub-tests. Each of these measures a student's ability to perform the kinds of intellectual tasks required of college students. Most of the items on the tests are concerned with applying what has been learned and are not primarily concerned with specific and detailed subject matter.

The following describes the four tests:

The English Usage Test is a 75-item, 40-minute test that measures the student's understanding and use of the basic elements in correct and effective writing; punctuation, capitalization usage, phraseology, style, and organization. The test gives considerably greater weight to clear and effective expression than to rote recall of rules of grammar. Included are four prose passages with certain portions underlined and numbered. For each underlined portion four alternatives are given. The student must decide which alternative is preferable.

The Mathematics Usage Test is a 40-item, 50-minute examination that measures the student's mathematical reasoning ability. This test emphasizes the solution of practical quantitative problems encountered in many college curricula. It also includes a sampling of mathematical techniques covered in high school courses. The test emphasizes reasoning in a quantitative context, rather than memorization of formulas, knowledge of techniques, or computational skill. There are two general types of items. The first, verbal problems, presents quantitative problems in practical situations. The second consists of formal exercises in arithmetic, algebra, and geometry. Each item has five alternative answers, the last of which may be "not given".

The Social Studies Reading Test is a 52-item, 35-minute test that measures the evaluative reasoning and problem-solving skills required in the social studies. There are two general types of items. The first is based on four reading passages, the second on general background or information obtained in high school social studies courses. All items are multiple choice with four alternatives. The items based on reading passages require more than reading comprehension skills; they require the student to draw inferences and conclusions, extend the thoughts of the passage to new situations, make deductions from experimental or graphic data, and recognize a writer's bias, style, and mode of reasoning.

The Natural Sciences Reading Test is a 53-item, 35-minute test that measures the critical reasoning and problem-solving skills required in the natural sciences. There are two general types of items. The first is based on four reading passages, and the second on information about science. All items are multiple choice with four alternatives. The passages concern a variety of scientific topics and problems, with summaries of procedures and outcomes of experiments being the most common. The items require a student to interpret and evaluate scientific materials and, in particular to understand the purposes of experimental hypotheses, and generalizations which can be drawn from the experiments. The information items ask the student to apply what he has learned in high school science courses to familiar, new, and analogous problem contexts. Arithmetic computation and algebra are avoided.

These are the four sub-tests of the ACT series. Now, can you remember what they were?

You should have answered English Usage, Mathematics Usage, Social Studies Reading, and Natural Science Reading.

As is the case with most other tests, the result of taking the ACT is a score. In the case of the ACT, five scores are obtained; one for each of the four sub-tests, plus a composite score.

On each of the four tests in the ACT battery, the number of correct responses is the raw score. The raw scores are converted to standard scores on a scale with a range from 1 (low) to 36 (high). The minimum standard score for all four tests is 1; the maximum standard scores differ as follows: English Usage: 33; Mathematics Usage: 36; Social Studies Reading: 34; Natural Science Reading: 35.

The fifth score yielded is the composite score. This is the average of the combined standard scores on the four tests. The minimum is 1 and the maximum is 35. The median composite score for all college bound seniors is approximately 30.

From time to time it will be necessary that you recall the names of the five scores obtained from the ACT test. Please list these below:

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To check your answers, refer to the above section.

The final, and most important part of this package is the analysis and interpretation of group data. On the following page is a chart depicting the scores of BCC students and those of other state and national groups. Please study it carefully.

Comparison of BCC ACT Scores and Those of Other Groups

	BCC (1970)	BCC (1969)	College Bound National Norms (1970)	Entering Fr. in Jr. Col. (1970)	Entering Fr. in N.J. Jr. Col. (1970)
Mean ACT Composite	17.4	15.9	19.4	17.9	16.9
English	16.1	14.8	18.5	16.8	15.8
Social Science	16.6	14.5	18.8	17.6	16.3
Math	18.2	17.1	18.8	17.8	17.2
Social Science	18.0	16.8	20.1	19.0	17.7

A number of things can be implied from the table. For example, look at the first two columns. From this it can be clearly seen that the students who entered in 1970 definitely scored higher than those who entered in 1969. Why do you think this is true?

Further, students who entered BCC scored higher as a group than did those who entered other New Jersey county colleges. Does this tell you anything?

Now let's see if there are any differences between BCC students and entering freshmen in other junior colleges around the nation. Although slightly above national norm in social science, BCC students as a group scored lower than did students in other junior colleges. What do you think might account for this?

Do you think the fact that BCC is a relatively new college - in the Northeast - might have some affect on this? Would you expect this to change in time? Judging from what you know about Burlington county, would you expect BCC students to eventually

be below or above the mean for other junior colleges?

Now, look at the differences in the data on BCC students and that of college bound high school seniors. Compare college bound seniors with the national sample of freshmen entering junior college. Could this be one of the reasons why community colleges offer developmental courses in English, Math, and Reading? Charts depicting the most salient ACT data about BCC students are enclosed. These charts include data from 1969, 1970, and 1971. Comparative data from several other groups is also shown.

NOTE: The information discussed in this package is just a small portion of the wealth of data obtained about entering students from the ACT. The comprehensive description of each freshmen class received each year also includes such items as:

EDUCATIONAL ASPIRATIONS - Data on students' proposed educational majors, vocational choices and degree aspirations.

STUDENT PERSONNEL NEEDS - Tables are provided for students' plans in such areas as housing, campus transportation, financial aids needs, extracurricular plans, etc.

NON ACADEMIC ACHIEVEMENTS - The number of out-of-class high school achievements are provided in the areas of science, leadership, art, music, writing, speech, athletics, practical skills, and work experience.

DEMOGRAPHIC DATA - Data is provided for such items as year of birth, race, family income, major feeder high schools, etc.

BURLINGTON COUNTY COLLEGE  
PEMBERTON, NEW JERSEY  
PRE-SERVICE ATTITUDINAL SURVEY  
REVISED form

DIRECTIONS: Using the attached automata card, please mark each item according to the following code. DO NOT SIGN YOUR NAME

CODE COLUMN: A - Strongly agree

B - Agree

C - Not Sure

D - Disagree

E - Strongly disagree

1. A community college is essentially the same as a two-year university extension campus.
2. A community college teaching position is identical in scope and emphasis to a teaching position at a senior college or university.
3. Offering non-credit adult education courses should be one of the basic functions of a community college.
4. An open-door admissions policy requires more curricular offerings than does a restricted admissions policy.
5. It is unrealistic and an unsound educational policy for a community college to attempt to provide post high school programs for varying ability levels.
6. Community service should not be one of the major functions of a community college.
7. A community college provides educational opportunities to a broader segment of the community than does a four-year college.
8. Remedial education for high school graduates is a responsibility of a community college.
9. The general educational level in a community should be raised by the presence of a community college.
10. Community service and participation should not be an obligation of community college faculty.
11. A community college more closely resembles a high school than a four-year college in outlook and program.
12. All faculty members in a community college should be expected to provide academic advisement to students.
13. A community college should be aware of the vocational and technical manpower needs of its community and should offer programs to meet these needs.
14. A community college is primarily a "teaching institution" therefore faculty research and publications has a much lower priority than in a senior college or university.

15. A community college is primarily an educational institution and should not become involved in special services to the student (e.g., job placement, financial aid, and assistance with personal problems).
16. A community college should offer a sufficient variety of programs such that the student who does not succeed in one has a good chance of finding another better suited to his talents and interests.
17. Remedial courses for adult non high school graduates should not be the concern of a community college.
18. Academic standards in a community college are necessarily lowered by the mixture of non-academically inclined students who attend.
19. Academic counseling of students by individual instructors is both possible and highly desirable in a community college.
20. One of the functions of a community college is to afford an educational opportunity for those who cannot qualify for attendance at senior colleges and universities.
21. Learning opportunities for students not motivated toward the usual academic subjects are an appropriate part of a community college curriculum.
22. Proximity of a community college to students' homes reduces financial burden and sometimes makes available education otherwise inaccessible.
23. Vocational guidance by professionally trained counselors is more important in a community college than in any other institution of higher education.
24. Course selection is basically the students' responsibility in a community college and, therefore, the college need not make extensive provisions for aiding the student in this area.
25. Courses in community colleges should be taught using methods similar to those used to teach equivalent courses at senior colleges.
26. The content of courses in a community college should be determined by the content of similar courses taught at senior colleges.
27. An open-door admissions policy infers that any high school graduate or person 19 years of age or older should be allowed to enroll in any freshman course offered by the college.
28. The primary purpose of higher education is to prepare for an occupation.
29. Students in community colleges are not significantly different from students in senior colleges.
30. The role of a faculty member in a community college varies significantly from the role of a faculty member in a senior college.
31. There is no difference between a community college and a junior college.
32. Most students attending community colleges have very little idea regarding what they want to do with their lives.
33. The fact that most students attending community colleges work does not necessarily mean that their grades will be lower.

34. Many of the students who chose to attend community colleges are equal in ability to those who attend four-year colleges.
35. The outstanding feature of the lecture as a method of instruction is that it causes the student to do most of the reading and studying.
36. Two equal reasons for giving tests are to determine if students are learning and to determine if teachers are teaching.
37. The main reasons students attend community colleges are low cost and proximity to home.
38. The teacher has not taught until the learner has learned.
39. Teacher effectiveness is the ability of a teacher to produce agreed upon educational effects in a given situation or context.
40. Academic learning can only take place in a classroom and with a live teacher.
41. A large number of "D's" and "F's" in a course indicates "high standards" of teaching.
42. A student should be allowed to take the final examination in any course on the first day of class and if he makes an "A" or "B", then be given that grade for the course without further class attendance.
43. The aptitudes, achievements, and backgrounds of the students in a classroom are approximately equal.
44. A student's final course grade should depend on an agreed upon level of competency in learning rather than a comparison with the achievement of other students in the class.
45. All students learn in the same way and take approximately the same amount of time to learn the same thing.
46. Listening to lectures and reading text books are the most powerful means for changing any student's behavior.
47. The more specific and measurable the learning objectives of a course are, the less the students have to be in a lecture situation with a live teacher.
48. Most students retain knowledge without requiring much review and relearning.
49. The design of an effective instructional system should be such that 90% or more of the students can eventually earn an "A" or "B" grade in the course.
50. Traditional course grades tell us what a student knows and can do.
51. It is possible for 90% or more of your students to eventually learn 90% or more of whatever you think is important in your courses ("A" and "B" worth of your course).
52. A "systems approach to education" can humanize the learning process.
53. The teacher's role should be that of facilitating learning.
54. Group-teacher interaction is superior to one-to-one interaction in producing learning.

55. I expect my students to like the behavioral objectives I prepare for them.
56. The purpose of education is to insure learning.
57. Significant learning can occur without group instruction.
58. Students need group settings to learn effectively from their teachers.
59. Instructional media and materials of the audio-visual type can be used not as supplements to, but as replacements for, more conventional methods of teaching.

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## APPENDIX E

### Checklist of Materials Furnished New Faculty Prior to Arrival on Campus

The following list of items was routinely sent to each new faculty member prior to his arrival on campus. Feedback was overwhelmingly positive.

1. Road maps of:
  - A. Burlington County, and
  - B. New Jersey
2. "Family Fun for Everyone in New Jersey", a letter-size brochure published by the New Jersey Department of Conservation and Economic Development.
3. "Welcome to New Jersey", a 40 page "slick" brochure containing information about beach resorts, lakes and streams, state parks and forests, summer theaters, hunting and fishing, boating, horse racing, skiing, historic New Jersey, etc.
4. A lengthy memo from the Dean containing information about:
  - A. Housing (lists of realtors, motels, and apartments [with rates])
  - B. Loans
  - C. Hospitalization coverage, including starting dates
  - D. What to do about unresolved degree problems
  - E. How to establish credit fast
  - F. Reminder on income tax deduction for moving expenses
  - G. Salary information - when first check would be paid, regular pay dates, and how to compute take-home pay
  - H. Teachers certification information for spouses planning to teach in the public schools.
5. Brochure entitled, "Year Round Guide to New Jersey State Forests, Parks, Natural Areas and Historic Sites"
6. Brochure on New Jersey state forest and park campgrounds
7. Brochure, "An Introduction to Burlington County, New Jersey"
8. Brochure describing health benefits program
9. College catalog
10. List of graduate schools within a 100 mile radius

11. Driver's license examination procedures, car license registration information
12. Public school information, registration and opening dates, teacher application forms and procedures
13. Newspapers, areas covered, and circulation
14. List of area hospitals and medical centers
15. Information on TIAA-CREF and state retirement system and article pointing out advantages and disadvantages of various TIAA-CREF plans.

### Preface to Evaluation Summaries

In all, a total of 18 instruments were administered in evaluating the six versions of the materials. To include the complete results from all of these would triple the length of the report and significantly reduce the probability of it being read. Since the primary purpose of this report is to provide assistance in developing pre-service programs, and not to provide a complete case history, a great deal of discretion was used in determining which evaluation reports would be included. (All comments (both good and bad) pertaining to individuals were edited out, as were comments irrelevant to the primary purpose of the report.

## APPENDIX F

Burlington County College Evaluation Summary  
1969 Pre-Service Program

Participants were asked to indicate the extent to which the Institute was successful in accomplishing the major goals (items 1-13) and to express their opinion on 12 other general questions concerning the workshop. A scale of 1-5 was used, with 1 being excellent, 2 being good, 3 fair, 4 poor, and 5 unsatisfactory.

	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
1. To identify the goals and purposes of Burlington County College, and to provide opportunity for involvement in the further development of these aims.	19%	57%	14%	5%	0
2. To see Burlington County College in its county, state and national setting.	24%	48%	24%	5%	0
3. To identify the characteristics of Burlington County College students and to distinguish between Burlington County College students and students in other two-year and four-year colleges.	0	24%	29%	38%	10%
4. To develop a plan for involving students in the government and life of the college.	5%	19%	29%	14%	19%
5. To identify the instructional role of a faculty member at Burlington County College and distinguish between it and the role of faculty members elsewhere.	0	52%	29%	14%	5%
6. To learn how to write behavioral objectives and to write behavioral objectives for courses which will be offered in the Fall.	19%	19%	33%	19%	10%

	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
7. To formulate learning content for courses.	24%	24%	43%	5%	5%
8. To identify and/or design appropriate learning resources.	10%	43%	29%	14%	5%
9. To become familiar with various teaching techniques and methods including recent technological developments and to select teaching-learning activities appropriate to stated behavioral objectives.	14%	43%	29%	14%	0
10. To develop a plan for the involvement of the faculty in the governance and life of the college.	24%	29%	19%	19%	10%
11. To gain familiarity with the background, planning and functional design of the new campus.	33%	48%	19%	0	0
12. To understand the rationale behind general education and its implementation at Burlington County College.	19%	43%	33%	5%	0
13. To become familiar with innovative practices in other colleges.	33%	33%	29%	5%	0
14. There was a judicious use of time during the seven weeks.	0	0	33%	19%	38%
15. The formal presentations provided necessary and complete information (practical and theoretical).	5%	10%	29%	38%	19%
16. The guest speakers complemented each other in presenting an understanding of the community college.	0	19%	29%	24%	24%
17. Ample opportunity was given to become personally involved with the guest speakers.	38%	43%	14%	0	5%

	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
18. Gave a clear understanding of your department in the total institutional program.	10%	33%	33%	14%	10%
19. Opportunity was given to become well acquainted with colleagues in the division.	62%	29%	10%	0	0
20. Time given for area faculty meetings was profitably used.	10%	48%	24%	10%	0
21. Sufficient time was given for the faculty to prepare for teaching.	10%	14%	33%	14%	29%
22. Resource personnel were available in discussing institutional policies.	10%	38%	33%	14%	5%
23. The use of time in faculty buzz sessions was profitable.	24%	33%	29%	0	5%
24. There was adequate explanation of basic institutional policies.	10%	19%	48%	14%	10%
25. It can be said, "We're off to a good start!"	10%	38%	48%	5%	0

## EVALUATION SUMMARY

### OE Participant Information and Evaluation Form 1970 Pre-Service Program

#### 1. Rate the Overall Quality of the Training Program:

(1) An outstanding Program

No.    %  
3    12%

(2) Very Good

No.    %  
12    48%

(3) Good

No.    %  
9    36%

(4) Adequate

No.    %  
1    4%

(5) Poor

No.    %  
0    0

#### 2. How Useful Will the Training Received in This Program Be to You in Your Professional Work?

(1) Very Useful

No.    %  
19    76%

(2) Fairly Useful

No.    %  
6    24%

(3) Not At All Useful

-0-

(4) Don't Know

-0-

3. Indicate Which Area of Focus in the Training Program Was of Primary Value to You in Your Professional Development by Ranking the Following:

(A) Content

1	2	3	4	NA
No.	No.	No.	No.	No.
%	%	%	%	%
1	1	2	4	17
48%	4%	8%	16%	68%

(B) Attitude Change

1	2	3	4	NA
No.	No.	No.	No.	No.
%	%	%	%	%
2	10	5	3	5
8%	40%	20%	12%	20%

(C) Methodology

1	2	3	4	NA
No.	No.	No.	No.	No.
%	%	%	%	%
21	3	1	0	0
84%	12%	4%	0	0

(D) Communication

1	2	3	4	NA
No.	No.	No.	No.	No.
%	%	%	%	%
1	11	6	1	6
4%	44%	24%	4%	24%

4. The Level of the Training Program in Terms of Background Experience and Competence:

(1) Was Over My Head

No. %  
0

(2) Integrated With my Previous Background and Experience

No. %  
24 96%

(3) Covered Information With Which I was Already Familiar

No. %  
2 8%

5. Rate the Following Characteristics of the Training Program by Using the Following Rating Scale: (1-5)

(A) Quality of Curriculum

1 No. <u>4</u>	2 No. <u>11</u>	3 No. <u>8</u>	4 No. <u>1</u>	5 No. <u>0</u>	NA No. <u>1</u>
% 16%	% 44%	% 24%	% 4%	% 0	% 4%

(B) Quality of Internship Experience, Practicum, or Field Work

1 No. <u>3</u>	2 No. <u>6</u>	3 No. <u>6</u>	4 No. <u>1</u>	5 No. <u>0</u>	NA No. <u>9</u>
% 12%	% 24%	% 24%	% 4%	% 0	% 36%

(C) Administrative Arrangements - Quality of Learning Atmosphere Created

1 No. <u>1</u>	2 No. <u>10</u>	3 No. <u>9</u>	4 No. <u>5</u>	5 No. <u>0</u>	NA No. <u>0</u>
% 4%	% 40%	% 36%	% 20%	% 0	% 0

(D) Administrative Arrangements - Effectiveness of Time Schedule of Activities

1 No. <u>1</u>	2 No. <u>2</u>	3 No. <u>7</u>	4 No. <u>10</u>	5 No. <u>5</u>	NA No. <u>0</u>
% 4%	% 8%	% 28%	% 40%	% 20%	% 0

(E) Quality of Full-time Teaching Staff

1 No. <u>5</u>	2 No. <u>12</u>	3 No. <u>5</u>	4 No. <u>0</u>	5 No. <u>0</u>	NA No. <u>3</u>
% 20%	% 48%	% 20%	% 0	% 0	% 12%

(F) Quality of Part-time Teaching Staff

1 No. <u>2</u>	2 No. <u>3</u>	3 No. <u>4</u>	4 No. <u>0</u>	5 No. <u>0</u>	NA No. <u>16</u>
% 8%	% 12%	% 20%	% 0	% 0	% 64%

(G) Quality of Consultants

1	2	3	4	5	NA
No.	%	No.	%	No.	%
5	20%	6	24%	7	28%

(H) Usefulness of Laboratory Sessions

1	2	3	4	5	NA
No.	%	No.	%	No.	%
7	28%	9	36%	3	12%

(I) Quality of Instructional Facilities

1	2	3	4	5	NA
No.	%	No.	%	No.	%
2	8%	12	48%	8	32%

(J) Living-Dining Facilities

1	2	3	4	5	NA
No.	%	No.	%	No.	%
0	0	0	0	4	16%

(K) Rapport Among Participants

1	2	3	4	5	NA
No.	%	No.	%	No.	%
14	56%	9	36%	1	4%

(L) Administration-Faculty-Participant Rapport

1	2	3	4	5	NA
No.	%	No.	%	No.	%
12	48%	8	32%	4	16%

(M) Criteria for Selection of Participants

1	2	3	4	5	NA
No.	%	No.	%	No.	%
2	8%	3	12%	3	12%

(N) Provision for Follow-up On Participants After Completion  
of Training Program

1	2	3	4	5	NA						
No.	No.	No.	No.	No.	No.						
%	%	%	%	%	%						
3	12%	5	20%	3	12%	1	4%	4	4%	12	48%

(O) Other

1	2	3	4	5	NA
No.	No.	No.	No.	No.	No.
%	%	%	%	%	%
0	0	0	0	0	0

6. The Length of the Program Was

(1) Too Long

No. %  
15 60%

(2) Too Short

No. %  
2 8%

(3) About the Right Length

No. %  
9 36%

Item 7

Edited Summary of Comments Made Regarding Strengths and Weaknesses of the Training Program

Strengths

An excellent orientation to a valuable and vital development in higher education. Very fine materials, very well presented.

Content, administrative personnel, need, applicability.

Different methods of instruction.

Content of program. Methodology of presentation.

Allowing participants to work at own rate.

The program taught the system method of teaching.

Complete involvement of trainees.

Gave me an insight into the ways to get to know a large group of people. Gave a new approach to the "learning" approach.

Learned how to write learning packets for curriculum which are very valuable.

Quality of materials. Good use of media. Good use of techniques, group seminars, independent study.

Thoroughness of planning.

The program was well organized. Readings were integrated with instructional objectives and discussions were practical. The material was orientated towards developing teaching skills by developing a different philosophy of education. It succeeded in its goal.

Material pertinent and succinct.

Presented good introduction to innovations in community college instruction.

Dedication to task. General organization.

Variety of instructional modes. Excellent group rapport developed.

NTL - encounter groups.

Forces us to plan and re-think both the content of the courses and techniques for facilitating student learning.

Preparation for the academic experiment.

Item 7 - Continued

Dedication to enable students to achieve greater satisfaction in learning. Participant rapport. Instructional media. Institute atmosphere.

Was very useful in preparing me for effective functioning in coming semester.

Necessary information imparted.

Item 7  
Weaknesses

Time not well utilized/organization.

Time of institute.

Quantity of reading is difficult considering our moving, unpacking, and adjusting to a new home.

Poor time sequences. "Verbosity" at times.

Poor use of time. Repetitious. Lack of certain follow-ups.

Self instructional format not followed. Poor use of time.

Schedule of activities firmer.

The moving process hindered the smooth operation of the institute and the materials used.

Very loose organization which resulted in an inordinate waste of time.

Too much was lost because of the move of facilities to the East Campus during the same time period of the institute.

Physical difficulties due to campus move created delays and inconveniences. Not enough opportunity (or resources) to work with the media.

Support (such as media) was poor.

Time could be better utilized but I believe it was because the physical facilities were in such a state of flux and transition due to move to a new site.

Item 8

Summary of Changes Suggested by the Participants

I would like to have had the program date changed so that there would have been more time after the program to work on applying what was learned to prepare for fall semester.

1. Reduction of time period and more intensity in presentation of learning sequences. 2. Inclusion of random selection selection of original faculty and administration. 3. Greater attempt to appeal to intellectual rationale underlying this approach to education and less emphasis on methodological skills.

I would suggest no changes in content, but would suggest that the program be more tightly organized. With better organization the institute could have been completed in two weeks.

Should be shorter, too much duplication of material to be read.

Would like to see time schedule revised so that meetings and group discussions were more continuously sequenced.

Shorten period of institute. More careful allotment of time/following schedule more direct follow-up of activities. Weed out repetitious elements.

More time for individualized instruction. More compact scheduling.

Improve organization and increase time spent on curriculum development.

Item )

Edited Comments Regarding Participants' Career Plans and  
Input, if Any, of Programs on Them.

An excellent orientation to an innovative learning strategy-philosophy.

Acquainted me with nature of systems analysis and problems with philosophy of behavioral objectives.

Yes (change of behavior). Concentration on learning (change in behavior). Sensitivity to students' needs.

Yes, I feel that I can do a better job in causing my students to learn. This will be accomplished through the application of more concise objectives and better measurement techniques.

Yes, the institute has given me skills and knowledge and exposed me to sources of additional skills and knowledge that I expect will enable me to be a more efficient director of learning.

Yes, we will be using the material in our teaching immediately. It broadened my understanding of learning and how people learn.

Content was valuable in providing learning of a methodology of instruction that has been insufficiently utilized in teaching.

It introduced a valuable and meaningful approach to education, instruction to be more specific. The "systems approach" is an answer to many educational problems, namely that of imparting knowledge to students.

Yes! This is a new approach to teaching and I feel it is better than any other now used.

This program enabled me to become much more familiar with a particular type of learning situation - one which I have used to some degree in the past but now feel more confident about.

It gave me a step-to-step procedure to follow, the things that had to be done, and the ways to do them in order to meet the requirements of the student-learner to meet his needs.

Application of objectives, systems approach widened range of potential variability of topic and/or subject taught. Also widened knowledge of community college, their students so objectives and systems approach can more readily be effectuated.

It provided an opportunity to review and apply a methodology I have been learning for some time.

Item 9 - Continued

A philosophy of education is essential for a good teacher. The "student learning" approach makes accurate intellectual sense and enables a teacher to orientate his program to fulfill the real life needs of the student.

By giving me an adequate background in the "systems approach" and "programmed learning" approach to education.

This program resulted in increasing my understanding and knowledge of the goals and philosophy and technology of new instructional methods.

Orientation to systems approach under which I will be working.

It allowed me to view the instructional modes in an entirely different light.

This program made clear that traditional lectures in a college do not fulfill the students' needs. Through this institute we have learned to improve our communications with students through organization of our ideas and to search for effective methods to help the student learn.

Not sure that the program enhanced my career development in any way that exposure to the college would not have.

Yes, it has changed my attitude toward certain aspects of education, given me ideas that I can see as applicable to my professional background (architect) and given me skills useful this semester.

I have come to understand better the philosophy of the two year comprehensive open-door college, so that I may function better as a teacher and faculty member.

## APPENDIX H

### EVALUATION SUMMARY

#### OE Participant Information and Evaluation Form 1971 Pre-Service Program

1. Rate the Overall Quality of the Training Program:

(1) An Outstanding Program

No.	%
11	66%

(2) Very Good

No.	%
5	30%

(3) Good

No.	%
2	12%

(4) Adequate

-0-

(5) Poor

-0-

2. How Useful Will the Training Received in This Program Be to You in Your Professional Work?

(1) Very Useful

No.	%
18	100%

(2) Fairly Useful

-0-

(3) Not At All Useful

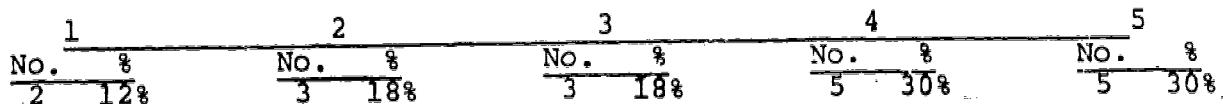
-0-

(4) Don't Know

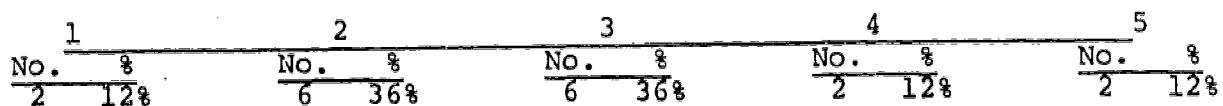
-0-

3. Indicate Which Area of Focus in the Training Program Was of Primary Value to You in Your Professional Development by Ranking the Following:

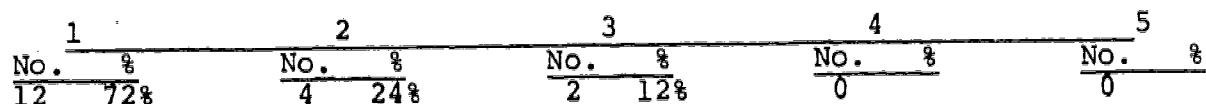
(A) Content



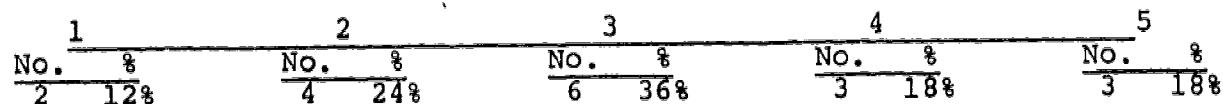
(B) Attitude Change



(C) Methodology



(D) Communication



4. The Level of the Training Program in Terms of Background Experience and Competence:

(1) Was Over My Head

No. %  
0

(2) Integrated With my Previous Background and Experience

No. %  
18 100%

(3) Covered Information With Which I was Already Familiar

No. %  
0

5. Rate the Following Characteristics of the Training Program by Using the Following Rating Scale: (1-5)

(A) Quality of Curriculum

	1	2	3	4	5	NA
No.	No.	No.	No.	No.	No.	No.
8	6 48%	8 48%	2 12%	0 0	0 0	0

(B) Administrative Arrangements - Quality of Learning Atmosphere Created

	1	2	3	4	5	NA
No.	No.	No.	No.	No.	No.	No.
2	12 12%	4 24%	1 6%	0 0	0 0	11

(C) Administrative Arrangements - Effectiveness of Time Schedule of Activities

	1	2	3	4	5	NA
No.	No.	No.	No.	No.	No.	No.
12	72 72%	4 24%	2 12%	0 0	0 0	0

(D) Quality of Full-Time Teaching Staff

	1	2	3	4	5	NA
No.	No.	No.	No.	No.	No.	No.
4	24 24%	3 18%	7 42%	3 18%	0 0	1

(E) Usefulness of Laboratory Sessions

	1	2	3	4	5	NA
No.	No.	No.	No.	No.	No.	No.
10	60 60%	3 18%	3 18%	0 0	0 0	2

(F) Quality of Instructional Facilities

	1	2	3	4	5	NA
No.	No.	No.	No.	No.	No.	No.
2	12 12%	3 18%	3 18%	0 0	0 0	10

(G) Rapport Among Participants

No.	1	2	3	4	5	NA
No.	4	5	3	0	0	6
%	24%	30%	18%	0	0	

(H) Administration-Faculty-Participants Rapport

No.	1	2	3	4	5	NA
No.	4	7	2	0	0	5
%	24%	42%	12%	0	0	

6. The length of the Program Was:

(1) Too Long

No.      %  
0

(2) Too Short

No.      %  
4        24%

(3) About the Right Length

No.      %  
14       84%

(4) No Answer

No.      %  
0

Item 7  
Strengths

Well organized generally.

1. Excellent presentation of how the systems approach is used in general. 2. The program was very comprehensive in regards to making the goals of the school clear. 3. Orientation in the area of familiarity with the school's location of services, and especially the fact of service oriented toward the faculty.

Material was pointed to what would be expected of me at Burlington County College.

1. Helped me articulate and more clearly conceptualize my course goals and objectives. 2. Introduced me to new techniques in curricular development.

It was overall well organized, well conducted and operated smoothly.

Very well organized. Time utilized to fullest. Content was beneficial.

The workshop gave me an in depth knowledge of what the systems approach is involved with and what is required of the instructor to make it function. It also enabled me to see how the instructional resource personnel and various types of equipment are integrated into the system. It also gave me the opportunity to experience the types of pressures and frustrations experienced by students who are often times overburdened with extreme course requirements and still have to work and maintain families.

1. Effective use of my time. 2. Presentations clear. 3. Good background material.

1. Facilities-very fine facilities and atmosphere. 2. Opportunity to ask questions and exchange opinions. 3. Opportunity for individual study of learning materials. 4. Degree of communication between institution and participants.

Clear-sighter prescription of activities and objectives; well focused activities; good chance for teacher-learned feedback excellent use of independent study activities and mediator presentations.

1. Its introduction and approach to Instructional Technology. Presentation of purpose of organization of the Division of Learning Resources. 3. The instructional systems approach of the workshop itself.

Realistic: Simulates student reaction to the instructional process.

Item 7 - continued

I feel the major strengths in the program were the thoroughness with which it was put together, the rapport between the leaders of the program and the participants, and among the participants. The spirit with which it was conducted created an enthusiasm and maintained the interest of the participants.

Informal-comfortable surroundings. Informative and sequential.

Major strengths were expertise of the teaching personnel, excellent facilities and the learning atmosphere established by the administrators. In addition, the rapport of the entire group was excellent, and the quality of the learning materials seemed superior.

### Weaknesses

The time allotted to complete tasks assigned was inadequate in my particular case.

There was not quite enough time for some things in the program.

The length of the program was too short. Better use of available time might be achieved if the introduction and review of facilities were undertaken in one day, on about the third day.

1. Too much material to cover in a short time. 2. Not enough discussion in regards to the practicality of applying the material to actual class situations. 3. Not enough independent study time. 4. Not enough coverage in individual disciplines as far as applying the systems approach to education.

Too much overlap in what instructors were teaching.

Not enough time to apply the systems approach to our particular courses. 2. Too much time spent on support personnel and services.

Not enough time to work on individual course development.

Too much duplication in presentation and packets. More work than time.

It was too repetitious in certain areas (introducing instructional resource personnel and their responsibilities). There were too many references to consult until trying to synthesize statements and ideas became quite difficult (although all of the authorities were very informative and had excellent ideas to offer). Too much material was crammed into such a short time.

Some presentations too long.

1. Need to rearrange some of the activities-just a matter of juggling the schedule. 2. More opportunity for independent study sooner. 3. Need to select out some learning material which overlap unnecessarily.

While length of program was about right for its overall purpose, it was a bit overwhelming in sheer quantity of new concepts, information, skills and attitudes participants were apparently expected to master or abort. 2. Hence, inputs perceived by students as a lower priority became distractions from other vitally important, but demanding learning processes already under way.

A bit of repetition in assignments; lack of attention to immediate, individual problems facing new instructors, re: opening of classes in semester. Lack of definite orientation re: objectives and goals and strategies used in courses to be taught in September.

Could be more individualized.

There was an overwhelming amount of material to be read and digested in such a short period of time.

Major weakness was the time schedule. Two weeks seemed ample if the schedule of activities was revised.

Item 8

Summary of Changes Suggested by the Participants

I would give more time on campus during institute hours to complete reading, writing, film viewing, etc. More time should be devoted to dealing with the immediate problem of "what do I do when the term starts next week?"

The sensitivity section should be longer. There should be more free study time. The program should be held the first two weeks of August and possibly half of the third week (more time is needed).

The program should be extended an extra week to give more time for actual familiarity with the study material. In conjunction with the above there should be some provision for correlating the systems approach to our own individual subject areas. There should be more time during and after the institute allowed for development of our individual courses in this new method.

More emphasis and time should be spent on the systems approach and less emphasis and time should be spent upon the support personnel and services.

As a whole, I feel the program was quite good. I would however, redevelop the program to try to eliminate some of the duplication in both packets and presentations.

I would like to see less time spent on instructional resource personnel introducing their roles and equipment. I would also like to see more time spent on writing objectives and packets during independent study, which actually deal with a course I am going to teach.

Overall the program was good. Most of the changes I would recommend would involve scheduling of time and of events. Along with the introductory procedures used (first day events) I suggest that Packet 6 on the Systems Approach and the PPIT self instructional units be put at the beginning of the program. Also, while working through the packets, individual participants should be able to use these times and materials to begin developing practical syllabi and beginning instructional units for the courses they will be teaching. Finally, the tours, and introductions to personnel, hardware and software of a support nature should come more toward the end of the program.

Whatever time is needed should be allowed for division chairmen to assist new teachers in understanding the facilities, materials, goals and objectives concerning assigned course work in September. This is necessary so instructor can use interval between institute and opening of classes for instructional preparation. All other institution wide orientation procedures should be continued. They are excellent.

Item 8 - continued

1. Independent study lab hours changed from 8:30 a.m. - 4:00 p.m. to 8:00 a.m. - 6:00 p.m. 2. Include "Objectives for College Courses" and "Developing Individualized Instructional Material" in the pre-workshop package of required reading. 3. Devote all of 1st week to "Instructional Systems" rather than spreading over two week session. 4. Presentation of support by Division of Learning Resources should be reduced.

1. Materials could be coordinated and consolidated to eliminate overlap and repetition. 2. More time could be allotted for independent study.

1. A condensation and organization of tours. 2. Increase of independent study time. 3. More time to relate learnings to specific areas or our specialized fields.

Item 9

Edited Comments Regarding Participants' Career Plans and Impact,  
if Any, of Program on Them.

I think that this program has helped me to understand exactly what comprehensive community college teaching entails, and it has made me want to stay in community college teaching. It has helped me to see the need for community college teachers as well as the real satisfaction one can derive from community college teaching.

I feel the outlook presented in this program is the core of all levels of teaching for the future. I feel this program prepares us for this future (the foundation for it). I plan to stay in higher education.

This program permitted me to verify my career goals: Transference of my educational and business experience to the students. The program not only covered an effective mode of "creating learning" but permitted an exchange of teaching experiences and practices with my program colleagues and instructors.

I plan to remain in college teaching and since the institute, my ideas about the community college have become more clear as far as the aims and reasons for their existence.

My career plans are to expand and develop my skills as a teacher in higher education. This program helped me articulate and more clearly conceptualize my course goals and objectives. It also introduced me to new techniques in curricula development.

My career plans are eventually to work in programs that deal with remedial or developmental education for the disadvantaged student. More precisely, I plan to do a considerable amount of curriculum development to help in those areas. This workshop has provided me with tremendous enrichment materials. My future educational plans include the area of educational statistics and curriculum development.

To continue to teach in the 2 year college. The program showed me the importance and real challenge of the 2 year community college.

"Through familiarization with the operation and support services introduced in this program I hope to increase both my subject area knowledge and means of implementing diversified instructional strategies so that my students will be able to learn more and with greater ease, and that the educational goals proposed be more specifically stated and measured." I feel that this introductory program and the type of instruction which will result from it will have a marked positive effect on the educational process in this country, and perhaps the world.

Item 9 - continued

After 16 years in various industrial environment I have made a major career change into community college teaching. This was a carefully thought out step, but still represented leaving the security of a situation wherein I had established a noted reputation to confront a situation wherein I was an unknown and about which I understandably know very little. This program contributed substantially to my understanding of the community college environment and to my self-confidence in confronting a new career path.

The Pre-Service Workshop has enhanced my career development through my introduction to the independent study sequence to assist student learning via the learning packet.

Plans have been to search for meaningful instruction. A year ago, I was introduced to "systematic" instruction at Northeastern University, Boston. This program has extended competence in developing individualized instruction.

My career plan is to continue teaching. This program has helped me to better plan my courses, to have a better insight into the objectives of college where I am working.

Systematic approach to education - having been introduced to this aspect of education and having seen its unlimited uses and also its supreme effectiveness I plan to acquire at least a master's degree, to teach in this institution, and to utilize what I have learned in this workshop as a major tool in educating others.

Career plan is to continue teaching at the junior college level. This workshop has impressed me with the significance and challenge of instruction at that level.

APPENDIX I

Evaluation Summary of Field Test

Ocean County College  
June 12-22, 1972

1. Rate the Overall Quality of the Training Program:

(1) An Outstanding Program

No.	%
4	21%

(2) Very Good

No.	%
13	68%

(3) Good

No.	%
2	11%

(4) Adequate

-0-

(5) Poor

-0-

2. How Useful Will the Training Received in This Program Be to You in Your Professional Work?

(1) Very Useful

(4) Don't Know

No.	%
17	89%

No.	%
1	5%

(2) Fairly Useful

No.	%
1	5%

(3) Not At All Useful

-0-

3. Indicate which Area of Focus in the Training Program Was Of Primary Value to You in Your Professional Development By Ranking the Following:

(A) Content

1	2	3	4	NA	
No.	%	No.	%	No.	
4	1%	5	26%	3	16%
				0	
				7	37%

(B) Attitude Change

1	2	3	4	NA	
No.	%	No.	%	No.	
5	26%	1	5%	4	21%
				2	11%
				7	37%

(C) Methodology

1	2	3	4	NA	
No.	%	No.	%	No.	
6	32%	5	26%	6	32%
				0	
				2	11%

1	2	3	4	NA	
No.	%	No.	%	No.	
3	16%	6	32%	2	11%
				3	16%
				5	26%

4. The Level of the Training Program in Terms of Background Experience and Competence:

(1) Was Over My Head

No. %

1 5%

(2) Integrated With my Previous Background and Experience

No. %

12 63%

(3) Covered Information With Which I was Already Familiar

No. %

6 22%

3. Indicate which Area of Focus in the Training Program Was of Primary Value to You in Your Professional Development By Ranking the Following:

(A) Content

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>NA</u>	
<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
4	21%	5	26%	3	16%
0		7	37%		

(B) Attitude Change

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>NA</u>	
<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
5	26%	1	5%	4	21%
2	11%	7	37%		

(C) Methodology

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>NA</u>	
<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
6	32%	5	26%	6	32%
0		2	11%	2	11%

(D) Communication

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>NA</u>	
<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
3	16%	6	32%	2	11%
3	16%	5	26%		

4. The Level of the Training Program in Terms of Background Experience and Competence:

(1) Was Over My Head

No.    %

1      5%

(2) Integrated With my Previous Background and Experience

No.    %

12     63%

(3) Covered Information With Which I was Already Familiar

No.    %

6      2%

5. Rate the Following Characteristics of the Training Program By Using the Following Rating Scale: (1-5)

(A) Quality of Curriculum

	1	2	3	4	5	NA					
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
6	32%	9	47%	3	16%	0	0	0	0	1	5%

(B) Administrative Arrangements - Quality of Learning Atmosphere Created

	1	2	3	4	5	NA					
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
7	37%	9	47%	3	16%	0	0	0	0	0	0

(C) Administrative Arrangements - Effectiveness of Time Schedule of Activities

	1	2	3	4	5	NA					
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
2	11%	8	42%	4	21%	1	5%	4	21%	0	0

(D) Quality of Full-Time Teaching Staff

	1	2	3	4	5	NA					
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
8	42%	7	37%	0	0	0	0	4	21%	0	0

(E) Usefulness of Laboratory Sessions

	1	2	3	4	5	NA					
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
2	11%	7	37%	5	26%	0	0	5	26%	0	0

(F) Quality of Instructional Facilities

	1	2	3	4	5	NA					
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
2	11%	11	58%	6	32%	0	0	0	0	0	0

(G) Rapport Among Participants

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	NA						
<u>No.</u>	<u>%</u>										
9	47%	9	47%	1	5%	0	0	0	0	0	0

(H) Administration-Faculty-participants Rapport

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	NA						
<u>No.</u>	<u>%</u>										
6	32%	11	58%	2	11%	0	0	0	0	0	0

6. The length of the Program Was:

(1) Too Long

<u>No.</u>	<u>%</u>
1	5%

(2) Too Short

<u>No.</u>	<u>%</u>
2	11%

(3) About the Right Length

<u>No.</u>	<u>%</u>
15	79%

(4) No Answer

<u>No.</u>	<u>%</u>
1	5%

7. Do You Feel the Workshop Met Your Objectives for Attending?

(a) completely

<u>No.</u>	<u>%</u>
4	22

(b) To a large extent

No.	%
14	72

(c) Somewhat

No.	%
1	6

(d) A few

-0-

(e) Not at all

-0-

8. If Your Objectives Were Not Met, to What Would you Attribute This?

(a) Time

No.	%
5	28

(b) Workshop not organized or designed in manner sufficient to sustain interest

-0-

(c) Workshop leader not able to "put it across"

-0-

(d) Other

1) Familiar with much of the covered areas

No.	%
1	6

9. Would you recommend the workshop to a colleague?

(a) Yes

No.	%
19	100

(b) No

-0-

10. Edited summary of comments made regarding strengths and weaknesses of the training program

Strengths:

- As a demonstration of non-lecture, inquiry-type teaching with the aid of AV equipment, the workshop itself was extremely valuable.
- Practical example of the use of behavioral objectives at each session.
- The workshop seemed to give an overview of current theories of community college teaching and challenged traditional ideas.
- Useful experience in writing behavioral objectives was given to each participant thereby testing individual abilities and the adaptability of various kinds of content material.
- I have attended courses with the same objective but none was as interesting and well presented. Having the sessions in a concentrated form was most advantageous.
- Workshop was very good because objective was achieved. No one could come away without knowing what a specific objective is, how to write one and how to test for one.
- Practice.
- Support materials were good and needed little in the way of clarification.
- The program was well organized.
- Well organized.
- Material passed out was most valuable and will be a source of information for years to come.
- Doing - not just listening.
- The wealth of printed data available and/or referred to.
- The capability for interaction - even with the differing levels of exposure (prior) to the subject.
- The lab session re: learning packages; put it all together and allowed for a most valuable evaluation session.
- It was practical and specific.

Weaknesses:

- Need to find out how much participants know.
- Participants did not have sufficient time to read all materials assigned. Materials should be made available prior to the workshop.
- More attention might have been given to explaining the actual transformation from the traditional lecture/receptive approach to an individualized instructional approach.
- Physical arrangements of classroom might have been more conveniently suited to the mode of instruction.

11. Summary of changes suggested by the participants.

- The workshop was very worthwhile and therefore it is hard to recommend specific changes, but I personally would like to see:
  1. more material from actual courses presented in various content areas, particularly humanities and social sciences.
  2. material on student response to these courses
  3. bibliography or list of current work being done, recommended periodicals, etc.
- The program for me needed more information related to methods of organization, control and revision of programs. More emphasis related to the administration of teaching load, etc.
- Materials made available prior to workshop. Should be scheduled to end before summer school begins. The two should not overlap. More staff members should be urged to attend.
- More specific criticism and correctives of objectives - either those submitted by participants or hypothetical ones. In general I felt the seminar was excellent and would have preferred another two or three sessions - it was too short.

12. Edited comments regarding participants career plans and impact if any of program on them.

- I expect to stay in community college teaching. Workshops such as this one which tackle the theories and problems of the community college are very stimulating. Most directly the workshop has affected my attitude and my conception of the goals of teaching. More practically, I expect that it will influence the preparation of tests and classroom sessions so that I will emphasize objectives and will attempt to make the students aware of the specific goals of the course.

- I am planning to use specific objectives as soon as I can get them written. However, about 3/4 of the way through course, I am thinking of not handing out objectives and then testing and comparing results of work - testing to see if after studying with objectives, students can then study alone with greater effectiveness.

- I happen to be near the end of my career, but I could justify the time devoted in that such effort helps re-vitalize my teaching and prevents it from running down hill. I hope my career ends on an upbeat- not a down beat.

- Have implemented the learning packet idea in my summer course.

- I hope to use many of the suggestions and ideas which I picked up during the workshop in my classes in the future. Many of the suggestions seem quite worthwhile.

-- Based upon my attendance and involvement in the workshop I have begun to revise and re-write my course objectives and to develop specific instructional objectives. I have adopted a part of the individualized approach in summer school classes by re-directing those students through the learning activities program in the event that they have failed to adequately demonstrate this mastery of instructional objectives on the 1st and 2nd mid-term. I expect to revise my entire course and curriculum for the purpose of adopting an individualized approach to instruction. In the last month I have devoted over 40 hours without compensation towards that objective.

- I plan to continue work on tapes but have decided to place emphasis on objectives since they give direction to both student and teacher. They also help the teacher to communicate better - a definite weakness in mathematics. I am thinking of writing a text "because I want to write a book which students can read".

- Yes - gave me more help in the use of behavioral objectives and the operationalization of them - useful to my teaching.

- The workshop "enhanced" my career development in that it clarified for me a mode of instruction that I wished to employ in a summer fellowship project I am working on for the college.
- I plan to get more teaching experience and I will use much of what was gained through this workshop in organizing and presenting an educational course this fall.
- My objective is to sell my faculty on individualized instruction based upon specific objectives and measured by criterion tests. This session enhanced my capability for bringing this about. A closely related objective is to encourage the rise of a multi-model approach as a teaching strategy. If these objectives are attained we will then move to an ends rather than a means oriented teacher evaluation system.

APPENDIX J

ANNOTATED BIBLIOGRAPHY OF PRE-SERVICE  
AND IN-SERVICE TRAINING LITERATURE

1. American Association of Junior Colleges. Faculty Development in the Junior College: A Second Interim Report on the Program with Developing Institutions. (Washington, D.C.: AAJC August 1970) Publication #10, 87 pp. ED 152 773.

This paper contains a discussion of the various programs involving community college teachers that were conducted with EPDA money and coordinated by the AAJC. It is an interesting look at a variety of in-service programs.

2. Asher, James J. In-Service Education - Psychological Perspectives. Far West Laboratory for Educational Research and Development, 1967. ERIC Document # 015 891.

A thorough summary of research on in-service education, including the history of in-service programs, goals, evaluation, psychological aspects, and recommendations for future programs.

3. Astin, A. W., and Lee, C. B. "Current Practices in the Evaluation and Training of College Teachers", Educational Record. XXXXVII (1960), pp. 361-375.

Results of an American Council on Education survey of two-year and four-year colleges in 1966.

4. Chronister, Jay. In-Service Training for Two-Year College Faculty and Staff: The Role of Graduate Institutions (Charlottesville, Virginia: Charlottesville, Virginia: Virginia University, School of Education, August 1970), 14 pp. ED 044 093 HE 001 833.

This paper urges graduate institutions to form constructive alliances with community colleges. It suggests that universities could be helpful in offering pre-service programs of graduate calibre and credit and in-service, problem-solving non-credit courses.

5. Cleland, S. "Internships are Second Best", Liberal Education. LX (1969), pp. 421-432.

Suggests that the best approach for developing competent college teachers is through a formal college or university program on the campus where the teacher goes to teach on a full-time basis.

6. Colman, Clyde Herbert. Organization and Administration of an In-Service Program for Public Junior College Teachers. Un-

published doctoral dissertation, University of Nebraska, 1968. (Order # 69-9084).

Attempted to identify a number of common criteria and procedures utilized by selected public junior college districts for organization and administration of in-service training programs for teachers.

7. Cooper, Leland. (comp.) Improving Instruction in the Two-Year College: Proceedings of a Conference for Two-Year College Teams. (Boone, North Carolina: Appalachian State University, December 1969), 61 pp. ED 038 979 JC 700 137.

The "how" of this conference is more important than the "what" for two reasons. The first is that it reached a great number of schools by inviting teams of two, and the second is that it became an annual event. The most pertinent paper to this topic was presented by I.E. Ready and titled "In-Service Education: The Key to Growth and Development of Community College Personnel," 7 pp.

8. Denemark, G. W. and Mac Donald, J. B. "Pre-Service and In-Service Education of Teachers", Review of Educational Research, 1967. XXXVII (June, 1967) pp. 233-247.

Excellent review of the literature, but useful only as a source of other leads.

9. Eaton, John M. A Study of Orientation of New Faculty Members in Michigan Community Colleges. Unpublished doctoral dissertation, Michigan State University, 1964. (Order # 65-1733).

Determined procedures used, faculty opinions of these procedures a year later, and suggested procedures for improving orientation and in-service activities.

10. Ellenbrook, W. L. "In-Service Training of Junior College Teachers for Orientation." ERIC Document JC 680 489.

Survey of what was being done in in-service training in the public junior colleges in Texas in 1968.

11. Ellenbrook, W. L. "Pre-Service Training of Junior College Teachers". ERIC Document # JC 680 489

Reviews the literature for the recommendations on preparing junior college teachers and presents the results of a survey regarding what is being done in Texas.

12. Faculty Orientation by a New Community College. William Rainey Harper College, Palatine, Illinois, 1967. ERIC Document # JC 680 220

Analogy of a three-week faculty orientation program held prior to the opening of the college. Good ideas included.

13. Garrison, Roger H. Teaching in a Junior College. Washington: American Association of Junior Colleges, 1968.

A booklet written for new or prospective teachers in community colleges. Provides an excellent orientation.
14. Gleazer, E. J., Jr. "Preparation for Junior College Teachers", Educational Record. XXXXVIII (1967), pp 147-152.

Description of need for graduate training programs for community college teachers and recommendations.
15. Gleazer, E. J., Jr. "Pre-Service Training of Instructors", Junior College Journal. XXXVIIII (May, 1969), p. 7.

Association recommendations for graduate training programs for teachers in two-year colleges.
16. Goldberg, M. H. "New College Teacher and His Professional Self Image." Educational Forum. XXVIIII, 1965, pp. 451-459.

Presents a strong case for orientation programs.
17. Gordon, Patrick K. In-Service Education with Recommendations Concerning its Implementation in American Junior Colleges. El Camino College, California, 1967. ERIC Document # JC 680 224.

Purposes, problems and recommendations for in-service training.
18. Graves, J. W. and Hixon, L. B. "How to keep New Teachers Happy: Teachers Rate Orientation Practices", Nation's Schools. LXXXI (April, 1968), pp. 76-78.

A comparison of teacher's and administration's viewpoints regarding certain practices related to orientation. A useful check list.
19. Gustad, John W. "Orientation and Faculty Development", Educational Record. (July, 1963), pp. 195-201.

Some observations and recommendations regarding on-campus orientation and in-service practices.
20. Hunter, Pauline and Kelly, M. Francis. Professional Development Project for Two-Year College Vocational and Technical Faculty. Buffalo: State University of New York at Buffalo, Department of Higher Education, 1968.

Attempt at developing a model for orienting two-year college faculty.

21. In-Service Training for Two-Year College Faculty and Staff.  
Washington: American Association of Junior Colleges, 1969.  
  
Nationwide survey providing information on continuing or refresher studies desired by faculty in community colleges.
22. Johnson, Lamar B. The Improvement of Junior College Instruction. (Los Angeles: UCLA Junior College Leadership Program, March 1970). Occasional Paper # 15, 88 pp. ED 040 707 JC 700 175.  
  
The paper centers mainly on sources of assistance in developing instructional skills and examples of programs to do this. The first section discusses the importance of in-service training in developing instructional skills. Of particular importance is the article by Derek Singer, "Quality Teaching and In-service Training," pp. 13-18. It lists 12 characteristics of a good pre-service training program. The article by Preston Valien, "The Office of Education and The Improvement of Junior College Instruction," pp. 22-23, lists many sources of funds for in-service programs.
23. Kelly, W. F. "Specific Procedures for the In-Service Improvement of the College Faculty", Educational Record. (April, 1951), pp. 132-141.  
  
Discusses ten broad areas directly related to the stimulation of better teaching.
24. Kelly, M. Francis, and Connolly, John. Orientation for Faculty in Junior Colleges. Washington: American Association of Junior Colleges, 1970.  
  
Provides a perspective on some current practices and many useful ideas for developing effective and orientation programs.
25. Kennedy, Gerald John. A Study of the Recruitment and Orientation Policies and Practices for Part-Time Instructors in the Public Junior Colleges of Illinois and Maryland. Unpublished doctoral dissertation, University of Maryland, 1966. (Order # 67-6122).  
  
Title is self explanatory.
26. Lefforge, Orland S. In-Service Training As An Instrument For Change. Gainesville, Florida: Institute of Higher Education, University of Florida, 1971.  
  
Proposes a unique approach to in-service training whereby the faculty member writes goals for his instructional improvement after consulting a master list of criteria. A major contribution is the listing of performance objectives for an in-service program.

27. McCall, Harlan R. "Problems of New Faculty Members in Colleges and Universities." North Central Association Quarterly. II (1961), pp. 221-234.

Results of a study of problems encountered by new college faculty members and those administrative procedures new faculty perceive to be helpful in alleviating those problems. Very useful as a checklist.

28. Murphree, Robert H. A Study of Orientation of New Faculty Members in Alabama State Junior Colleges. Unpublished doctoral dissertation, University of Alabama, 1967. (Order # 68-1058).

Purpose of the study was to develop a set of criteria which junior college administrators might use in assessing their faculty orientation programs and in giving direction to future program development.

29. O'Banion, Terry. People for the People's College, Community-Junior College Staff Development Priorities for the 70's. Washington, D.C., March 1972.

A report of the National Advisory Council on Education Professions Development.

30. Principles and Practices of Instructional Technology. General Programmed Teaching. Palo Alto, no date.

A workbook and slide-tape series dealing with improvement of instruction.

31. Poort, Stephen M. Guidelines for the Recruitment and Selection of Community College Faculty. Gainesville, Florida: Institute of Higher Education, University of Florida, 1971.

Excellent reference for guidelines in the areas of recruitment and selection of community college faculty.

32. Preparing Two-Year College Teachers for the 70's. Washington: American Association of Junior Colleges, 1969.

Report of a conference on the above topic.

33. Rapp, Marvin A. "Making Teaching More Effective," Improving College and University Teaching (Autumn 1961): 163-165.

This is more important for how it was done than what actually came of it. A series of small workshops were organized throughout New York state, with the idea of having community college instructors look into evaluation and improvement of their teaching. These were then brought together in first regional and then statewide meetings. This article describes the process and some of the preliminary results.

34. Richard, Jerrel Thurston. Critical Incidents in The Orientation of Newly Appointed Junior College Instructors. Unpublished doctoral dissertation, University of California, Los Angeles, 1964.

Title is self-explanatory.

35. Samlin, John R. In-Service Education in American Public Junior Colleges. Unpublished doctoral dissertation, Illinois State University, 1967.

Purpose of the study was to determine the extent and nature of certain in-service practices in the public junior colleges in the United States, and to offer recommendations for improving in-service education programs.

36. Schafer, Michael I. The Student Role of Teachers: Faculty Development in the Community College. Gainesville, Florida: Institute of Higher Education, University of Florida, 1970.

Study designed to develop a rationale for planning systematic faculty development programs as a means for improving instruction in public community colleges. A good overview.

37. Siehr, Hugo E. Problems of New Faculty Members in Community Colleges. East Lansing: Michigan State University, 1962. ERIC Document # JC 670 792.

Nationwide survey to identify common problems, helpful administrative procedures, and effective orientation procedures encountered by new teachers.

38. Singer, Derek S. In-Service Training for Two-Year College Faculty and Staff: A Survey of Junior and Community College Administrators (AAJC Faculty Development Project, August 21, 1969), 80 pp. ED 034 519 JC 690 368.

Junior college administrators were asked to list, in a survey, what they thought should be training priorities in six areas: 1) academic and voc-tech, 2) general education, 3) curriculum and learning, 4) aspects of two-year college, 5) administration and supervision, and 6) counseling and guidance. The report contains tables indicating responses, including the consensus that the programs should be on campus of the community colleges and during the school year. This report is frequently cited in developing both pre-service and in-service programs.

39. Smolich, Robert S. The Status of Professional Education Courses/Programs Specific to The Two-Year College in Eighty-Two Schools of Education, 1969-70. Canton, Illinois: Spoon River College, 1970.

Results of a nationwide survey during the spring of 1970 to determine the current status and anticipated growth of professional educational courses and programs offered by schools of education which are specific to the topic of the two-year college. Included student enrollment data. Very useful guide to graduate programs offering courses in community colleges.

40. Solomon, Roger Brumley. "Preparation for Teaching in Two-Year Colleges". Improving College and University Teaching. XVI (1968), pp. 125-128.

Recommendations for content of institutions offering programs to train community college teachers.

41. Tracy, Norbert J. "Orienting New Faculty Members in Colleges and Universities", North Central Association Quarterly. II (1961), pp. 214-221.

Summary of his dissertation which dealt with a survey of four-year liberal arts programs in the North Central Association. Attempted to compare faculty opinion versus administrative opinion regarding the utility of certain orientation practices. A good check list.

42. Vimcet Associates - Post Office Box 2714, Los Angeles, California.

A series of filmstrip-tape presentations on various topics related to improving instruction. They have been validated by James Popham.

43. Voegal, George H. Update 1: A Report on the Beginning Efforts in Instructional Development at William Rainey Harper College. (January 1970), 124 pp. ED 038 112 JC 700 069.

This in-service program was designed by the faculty participants and took place in the summer of 1968 (six weeks) and the school year of 1968-69 (three follow-up sessions). It centered on developing instructional concepts and strategies.

44. Wilson, Richard E. Anatomy of a Workshop for In-Service Education Personnel. Washington: American Association of Junior Colleges, 1970.

Description of a workshop conducted by AAJC to prepare in-service educational personnel.